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Journal of the AMERICAN MEDICAL WOMEN'S ASSOCIATION

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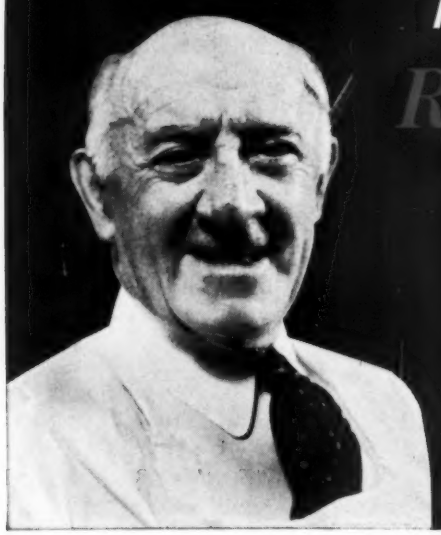

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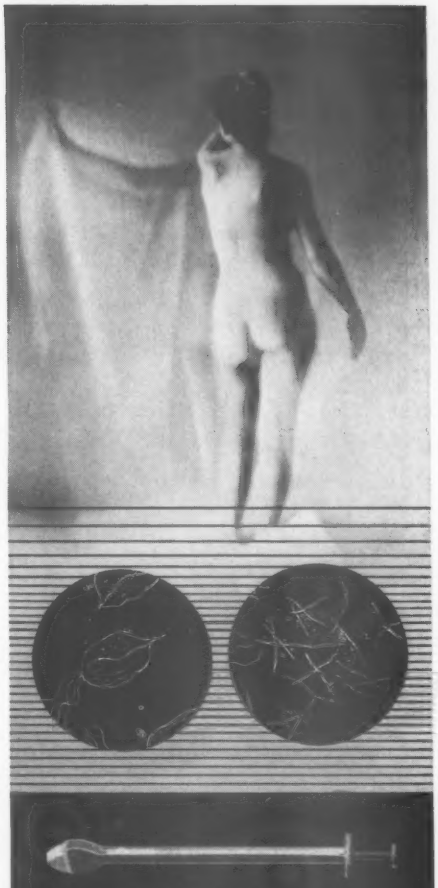
1. Gardner, H. L.; Dampeer, T. K., and Dukes, C. D.: The Prevalence of Vaginitis, A Study in Incidence, Am. J. Obst. and Gynec. *73*:1080 (May) 1957.
2. Williamson, P.: Trichomonad Infestation, M. Times *84*:929 (Sept.) 1956.
3. Lang, W. R.: Recent Advances in Vaginitis, Philadelphia Med. *51*:1494 (June 15) 1956.



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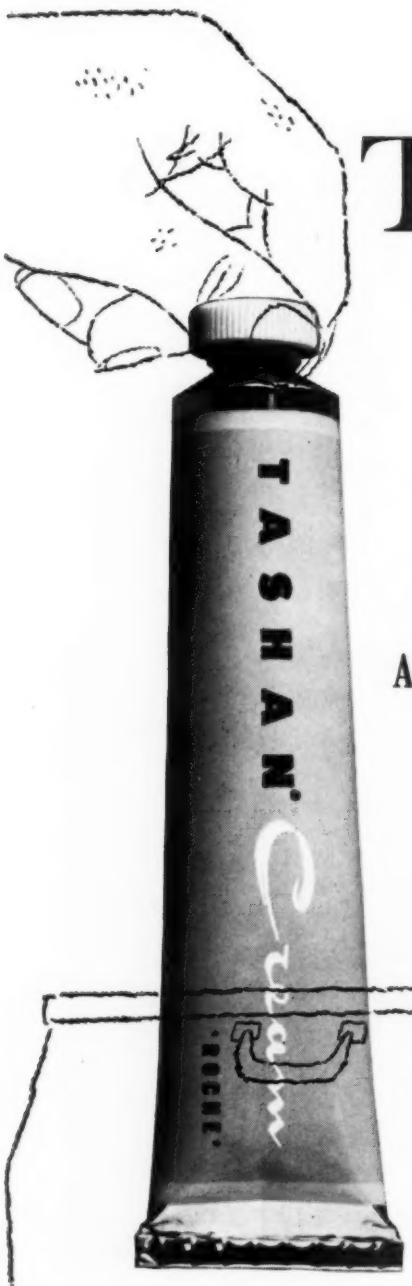

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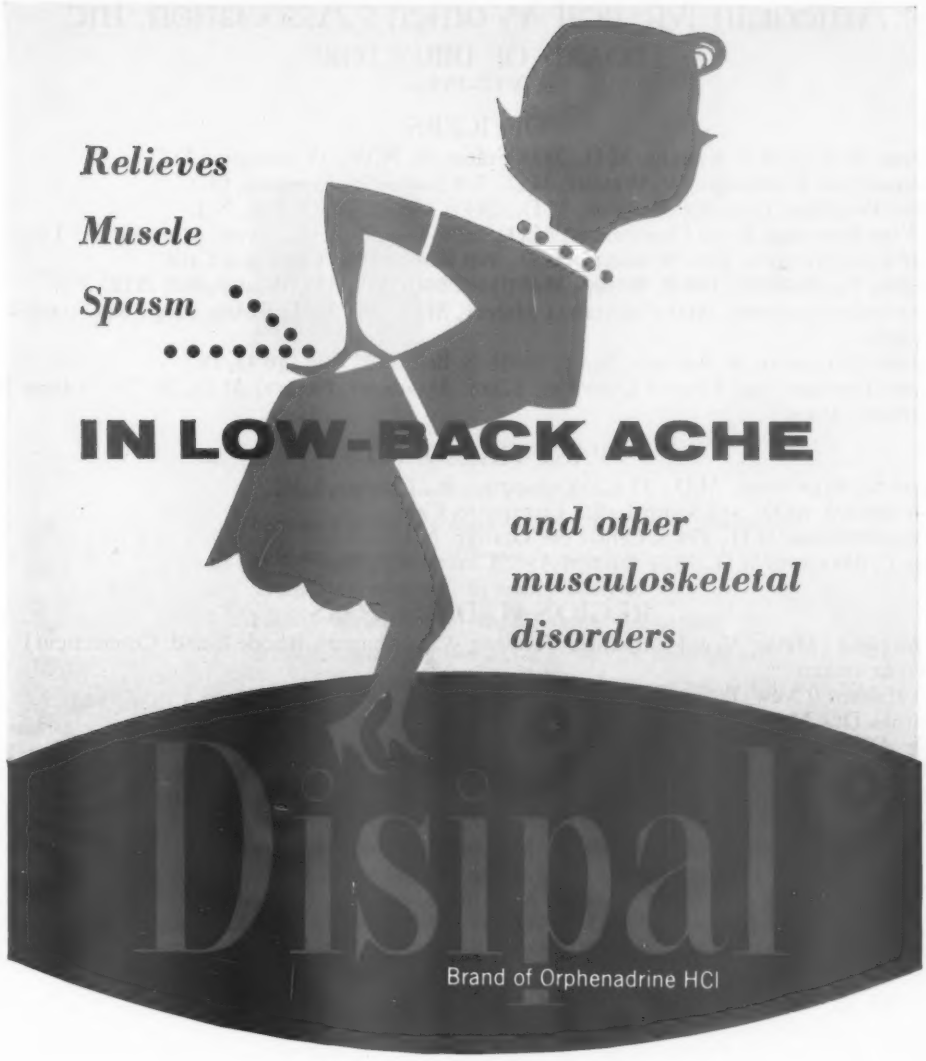

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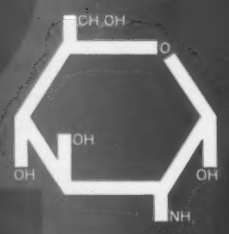

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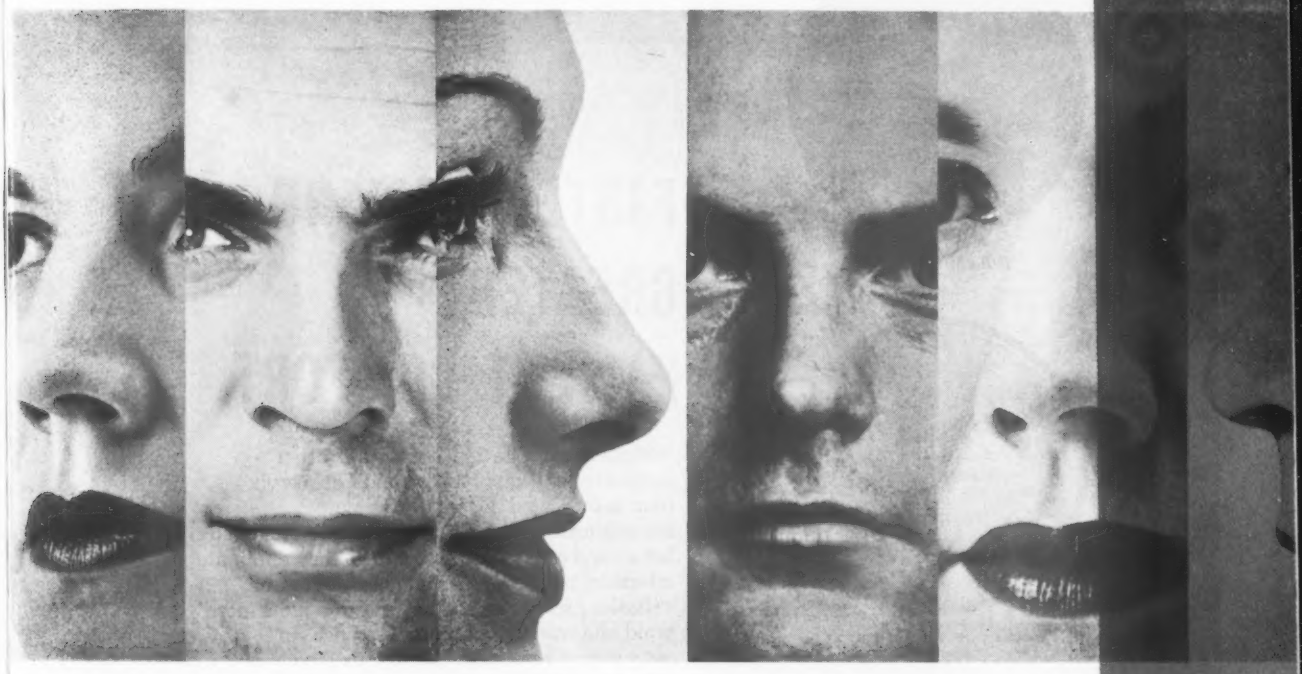

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FORMULA: 0.2% FURACIN in water-miscible base; hermetically sealed in yellow foil.

*Schwartz, J., and Nardiello, V.: Am. J. Obst. 65:1069, 1953.

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BRAND OF NITROFURAZONE

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NITROFURANS
a new class of antimicrobials—neither antibiotics nor sulfonamides

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"Instant" Powder/Liquid
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American Medical Women's Association, Inc.

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Membership Chairman: Paula Kaiser, M.D., 4015 Bradley Lane, Chevy Chase, Md.

Meetings held first Tuesday, October to May.

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Membership Chairman: Charlotte Kerr, M.D., 728 S. Ashland Ave., Chicago 7.

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(Continued on page 21)

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for an active pregnancy

You make life easier for your pregnant and lactating patients when you prescribe new FILIBON—a welcome advance in prenatal supplementation. Important new features ensure increased comfort, convenience and efficiency . . . at no increase in cost.

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Each capsule contains:

Vitamin A	4,000 U. S. P. Units
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Thiamine Mononitrate (B_1)	3 mg.
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Niacinamide	10 mg.
Riboflavin (B_2)	2 mg.
Vitamin B_{12}	2 mcgm.
Ascorbic Acid (C)	20 mg.
Vitamin K (Menadione)	0.5 mg.
Folic Acid	1 mg.
Ferrous Fumarate	90 mg.
Iron (as Fumarate)	30 mg.
Intrinsic Factor	5 mg.
Fluorine (as CaF_2)	0.015 mg.
Copper (as CuO)	0.15 mg.
Iodine (as KI)	0.01 mg.
Potassium (as K_2SO_4)	0.835 mg.
Manganese (as MnO_2)	0.05 mg.
Magnesium (as MgO)	0.15 mg.
Molybdenum (as $Na_2MoO_4 \cdot 2H_2O$)	0.025 mg.
Zinc (as ZnO)	0.085 mg.
Calcium Carbonate	575 mg.

Dosage: one or more capsules daily.

Supplied: attractive, re-usable bottles of 100 capsules.

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...IT DOESN'T STOP THE PATIENT

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Is she blue at breakfast? Prescribe BONADOXIN. Usually just one tablet at bedtime stops nausea and vomiting of pregnancy...

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EACH TABLET CONTAINS:

MECLIZINE HCl . . . . . 25 mg.
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References: 1. Groskloss, H. H., et al: Clin. Med. 2:885 (Sept.) 1955. 2. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957.

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phosphate-free calcium, 10 essential vitamins, 8 important minerals. Bottles of 100.

*due to calcium-phosphorus imbalance

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in urinary tract infections
look at the
Gantrisin record:

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published papers attest to
the safety and effectiveness
of Gantrisin.

AZO **GANTRISIN**

TO RELIEVE PAIN TO CONQUER INFECTION ROCHE

for urinary tract infections

Azo Gantrisin combats urinary tract infections and promptly provides relief of the attendant pain.

Azo Gantrisin achieves high plasma levels, and it is safe and soluble even in acid urine without forced fluids or alkalis.

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Gantrisin®—brand of sulfisoxazole
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THE PUBLIC AND NEW DRUG INFORMATION

We hear much comment currently from doctors relative to the rapid dissemination of new medical information to the public. Much of this comment is adverse. Indeed, doctors say that their patients, who read the newspapers and certain magazines carefully, come to them with a knowledge of new drugs or new discoveries which have not yet appeared in medical journals . . .

The first major publicity campaign in medicine came with the development of the Georgia Warm Springs Foundation (later, the National Foundation for Infantile Paralysis) in the early 'thirties, with its March of Dimes.

Until the early 1940's, the National Foundation practically had the field to itself, but then came the transformation of the American Society for the Control of Cancer into the American Cancer Society, the increase in activity of the American Heart Association, and the development of the Arthritis and Rheumatism, Multiple Sclerosis, Cerebral Palsy, Hemophilia and other foundations dealing with single diseases.

Each had to put its story vividly before the public in order to collect funds for the support of its activities. These events further stimulated the public appetite for medical information.

In the 'twenties, insulin, liver extract, parathyroid hormone, the toxoids, the early antipneumococcal sera, and certain vitamins were developed.

In the next ten years came many specific antipneumococcal sera. Most of the vitamins were identified, the sulfa drugs made their appearance (amid terrific publicity—they were the original "wonder" or "miracle" drugs), the causative agents of influenza were identified, as well as certain of the adrenal hormones, and excellent antimalarials were developed.

It was an exciting decade. It was followed by another; the 1940's, with the antibiotics ("miracle" drugs), the corticoids, even better antimalarials, the identification of Vitamin B12, the "atomic cocktail" and other astounding happenings.

We are now in the '50s. The new corticoids have been developed. New antibiotics have been discovered. The parasympatholytic and sympatholytic drugs have been increasing. Our ability to manage cancer, arthritis, etc., is growing. Salk vaccine prevents poliomyelitis (the biggest pay-off yet for a publicly supported foundation). New anti-hypertensive drugs are available, and finally the "tranquilizers" have caught the imagination of . . .[all].

It is easy to understand, as one looks back, why all of these discoveries (and many more which we have not mentioned) have made the front page. They have prevented, ameliorated, or cured disease. They have saved untold thousands of lives.

Why shouldn't they be front-page news? . . .

This is part of our contemporary scene with which, as you can see, pharmaceutical companies have essentially nothing to do. Therefore, doctors, don't rail at them or it. We have brought this situation on ourselves. It may at times make life a little more difficult for us, yet it has consistently made our relations with our public better. The American public supports American Medicine to the hilt. What more can we desire?—*Perrin H. Long, M.D.* (Reprinted from *Resident Physician*, January, 1957.)

gentle motivation to encourage normal elimination

Sal Hepatica®

LAXATIVE WITH ANTACID

speedy, gentle relief for constipation and excess acidity

Dependable—Draws water into intestines by osmosis, creating moist bulk and gentle pressure to initiate proper intestinal response.

ANOTHER FINE PRODUCT OF BRISTOL-MYERS

SALT
PEPPER

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heard
the call
for

Vi-Daylin®

Each delicious, 5-cc. teaspoonful of Vi-Daylin contains:

Vitamin A	0.6 mg. (2000 units)
Vitamin D	20 mcg. (800 units)
Thiamine Hydrochloride	1.5 mg.
Riboflavin	1.5 mg.
Pyridoxine Hydrochloride	1 mg.
Ascorbic Acid	40 mg.
Vitamin B$_{12}$	3 mcg.
Nicotinamide	10 mg.

and now Vi-Daylin Drops contain the same eight essential vitamins for infants, too!

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to help you and to help the new mother . . .

Ask your
Wyeth Territory Manager
for the

S-M-A
INFANT
FEEDING
SERVICES

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for sound infant nutrition

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American Medical Women's Association, Inc.

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(Continued)

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Secretary: Dorothy D'Sena, M.D., 22470 Nona, West Dearborn.

Meetings held five times a year.

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Membership Chairman: Edna Porth, M.D., 3130 Maple Drive, N.E., Atlanta 5.

Meetings held third Saturday monthly, except in June, July, and August.

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(Continued on page 24)

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HOTEL ROOM RESERVATION

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.

1958 ANNUAL MEETING

Meeting Headquarters June 19-22
Sir Francis Drake

Mail To: AMA Housing Bureau
61 Grove St., Room 300
San Francisco 2, Calif.

Please reserve: Single room ..... Twin-bedded room .....Suite.....

Hotels: First choice ..... Second choice .....
.. Third choice ..... Arrival at .....a.m. .....p.m.
Departure date .....Time of departure ..... a.m. .....p.m.

Names of all occupants (Please bracket those sharing a room): *Addresses*
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Please mail hotel confirmation to
Signed (Please print) .....
Street ..... City ..... Zone ..... State .....

IMPORTANT

RESERVATIONS–1958 ANNUAL MEETING

Rooms will be at a premium in San Francisco. The AMA Housing Bureau has contracted for most of the available hotel space. All reservations for hotel rooms must be cleared through the AMA Housing Bureau in San Francisco.

Reservations will be handled in chronological order. Reservations must give definite dates and approximate hour of arrival and the names and addresses of all persons who will occupy the rooms requested.

All reservations should be accompanied by a deposit check of $10.00.

The Housing Bureau has ruled that "the date of departure cannot be changed after reservations have been confirmed by the hotel. Physicians may reserve rooms through a prior meeting and retain them through the AMA meeting, June 23 to 27, if they so specify. If departure at close of prior meeting is indicated, guests are expected to release their rooms to physicians coming on for the AMA meeting only on June 23 to 27."

not only for protection

as the vaginal menstrual guard of choice...

but also for professional use

to retain vaginal and cervical medications after treatment and between office visits.

to protect against seepage after cervical biopsy or cauterization.

to absorb discharges or abnormal secretions.

Three Absorbencies—REGULAR, SUPER, JUNIOR—for varying requirements.

Made of pure surgical absorbent cotton—readily available and economical.

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Secretary: Mary Agnes Hopkins, M.D., 1035 Medical Arts Bldg., Dallas.

(Continued on page 26)

Please report all changes in Branch officers and chairmen as soon as possible to American Medical Women's Association, 1790 Broadway, New York 19, N.Y.

ROOM RESERVATION

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.
1958 ANNUAL MEETING

Women's City Club
of
San Francisco

June 19-22

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Please reserve .....Single room with connecting bath .....$5.00 per person
.....Single room with private bath .....$5.50 per person

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I will depart at ..... a.m. ..... p.m. Date.....

Persons who will share rooms with connecting bath
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Address .....

Signed (Please print) .....
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AN IMPORTANT ADVANCE IN MENOPAUSAL THERAPY

Because it replaces *half* control with *full* control.

Because it treats the *whole* menopausal syndrome.

Because *one* prescription manages *both* the psychic and somatic symptoms.

SUPPLIED: Bottles of 60 tablets.
Each tablet contains:

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2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate.
U. S. Patent No. 2,724,720.

Conjugated Estrogens (equine) ..... **0.4 mg.**
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DOSAGE: One tablet t.i.d. in 21-day courses with one week rest periods. Should be adjusted to individual requirements.

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Two-dimensional treatment of the menopause

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MILTOWN®
A Proven Tranquilizer
+
CONJUGATED ESTROGENS (EQUINE)
A Proven Estrogen

WALLACE LABORATORIES, *New Brunswick, N. J.*
who discovered and introduced Miltown, the original meprobamate.

Anxiety of pregnancy

'Miltown' therapy resulted in complete relief from symptoms in 88% of pregnant women complaining of insomnia, anxiety, and emotional upsets.*

'Miltown' (usual dosage: 400 mg. q.i.d.) *relaxes* ***both*** *mind and muscle* and alleviates somatic symptoms of anxiety, tension, and fear.

'Miltown' therapy does not affect the autonomic nervous system and *can be used with safety throughout pregnancy.**

**Belafsky, H. A., Breslow, S. and Shangold, J. E.: Meprobamate in pregnancy. Obst. & Gynec. 9:703, June 1957.*

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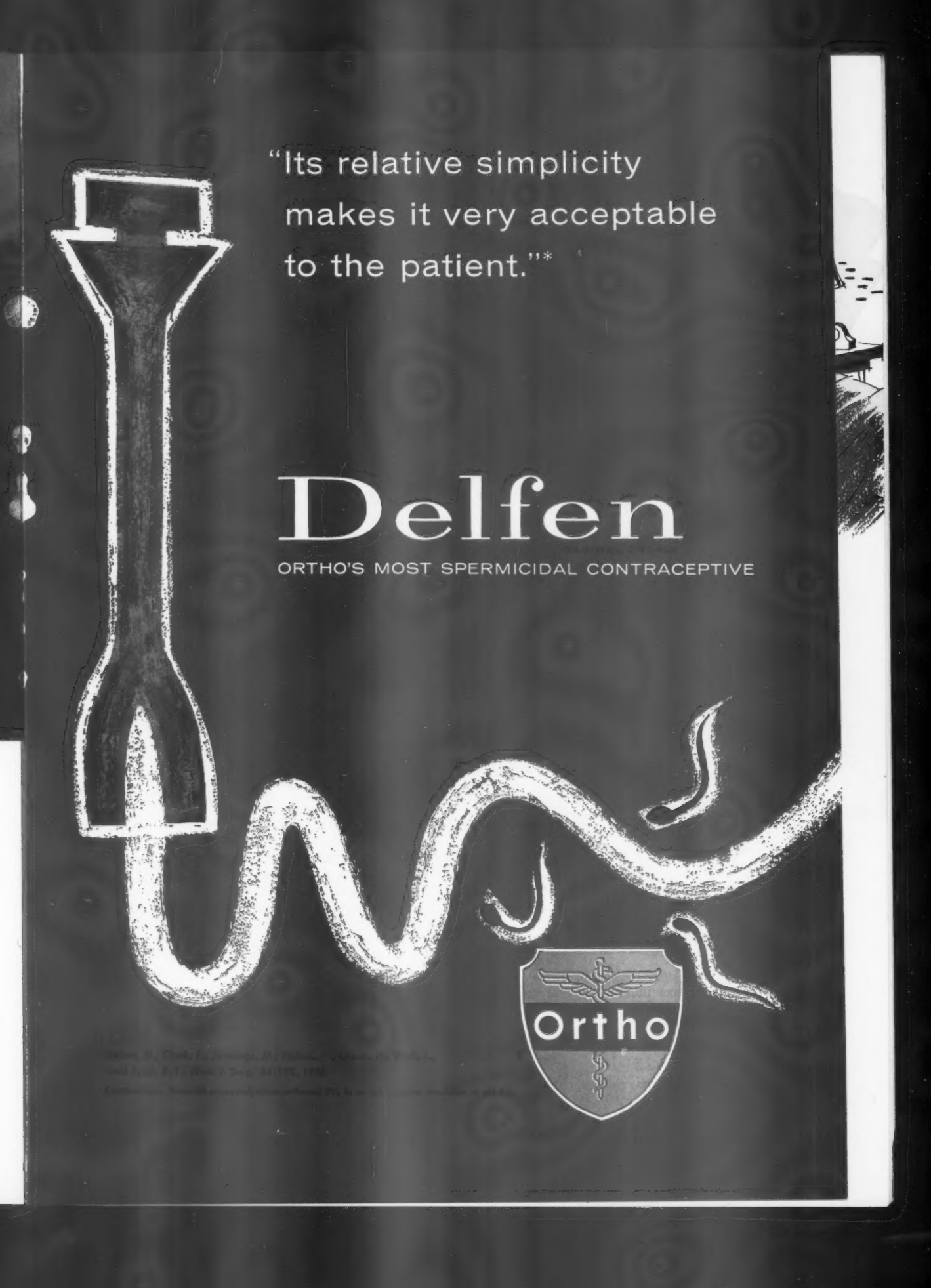
"Its relative simplicity
makes it very acceptable
to the patient."*
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AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.
1958 ANNUAL MEETING

San Francisco, Calif. June 19-22

Please indicate number of reservations for each

Friday, June 20....	Luncheon	$ 3.00	...Women's City Club. Program: Panel on "Emotional Health of Women"
	Dinner	$ 6.50	...Woolley Memorial Lecture
Saturday, June 21..	Luncheon	$ 5.00	...Group Discussion: "Emotional Health of Women"
	Dinner	$ 7.00	...Inaugural Address: Dr. Katharine W. Wright. Elizabeth Blackwell Award
Sunday, June 22...	Luncheon	$ 6.50	...1958-1959 Program Preview: "The Physician in the Role of Adviser"
Total		$28.00	

Prices include tax and gratuities

All meals except Friday luncheon at Sir Francis Drake

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sleep-disrupting
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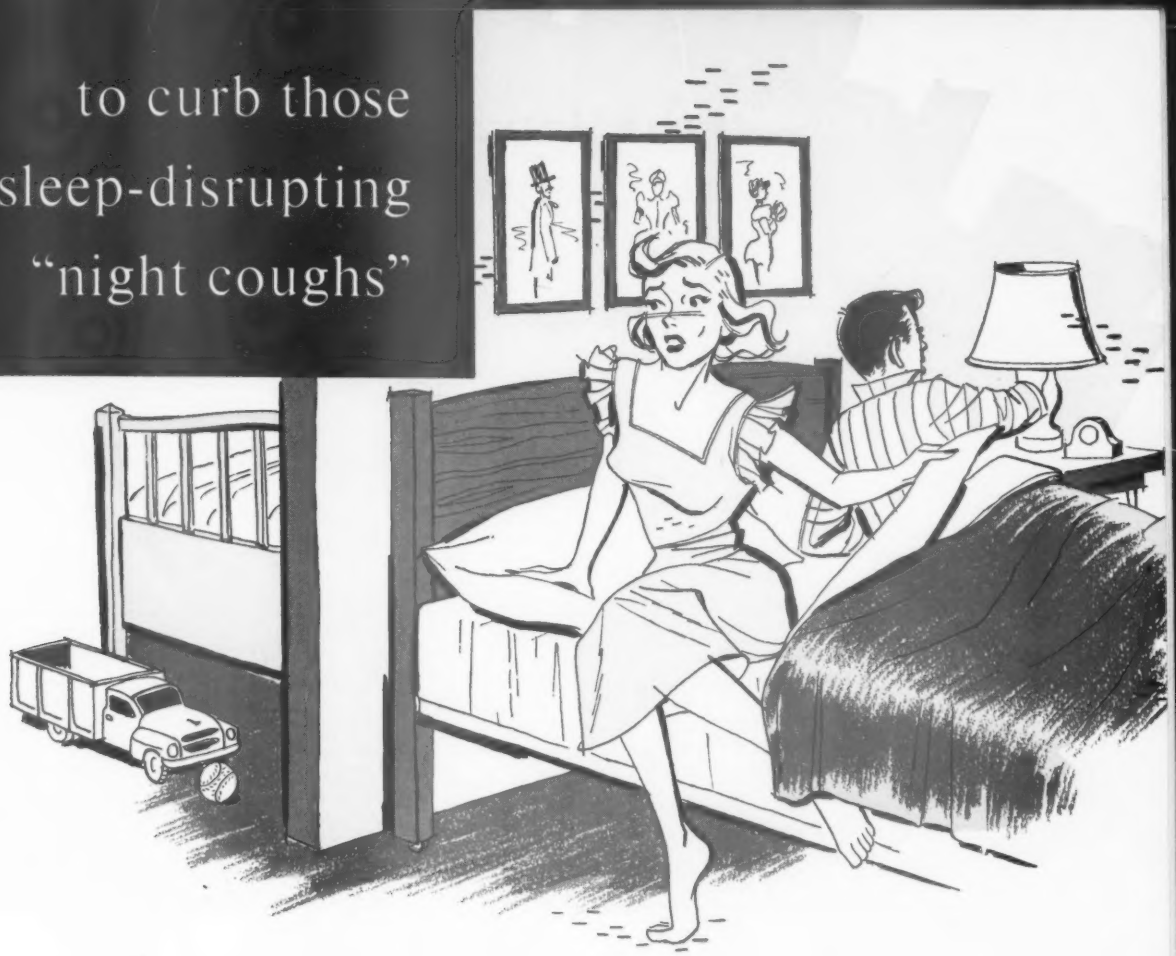

that waken the whole household...

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Clistin Expectorant is the only cough product containing CLISTIN Carbinoxamine Maleate—that well-accepted, potent antihistamine. Relieves coughs of the common cold and coughs of allergic or non-allergic upper respiratory conditions.

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"anti-cough"...

antihistaminic...

completely safe for pediatric use...

non-narcotic...

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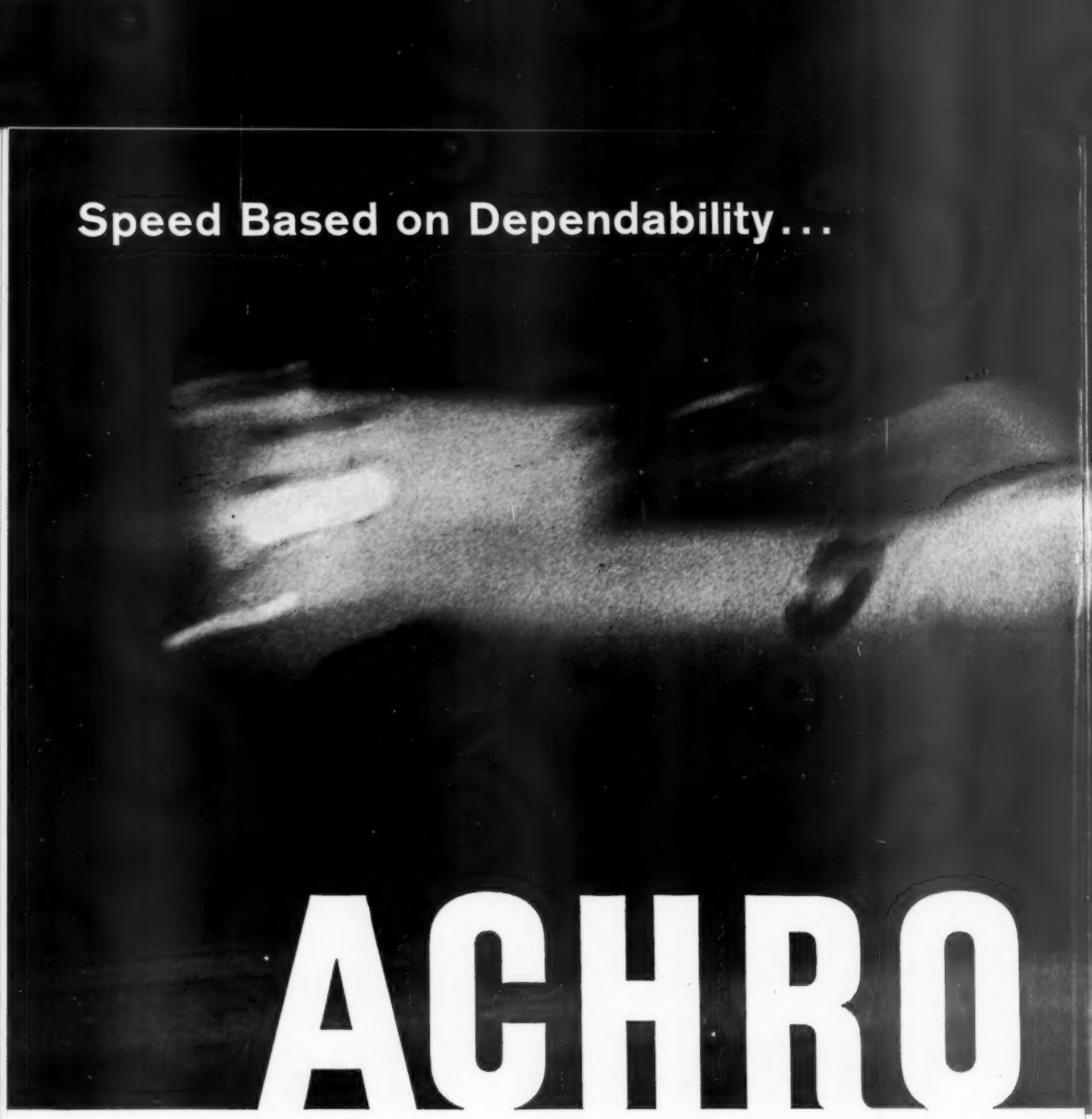

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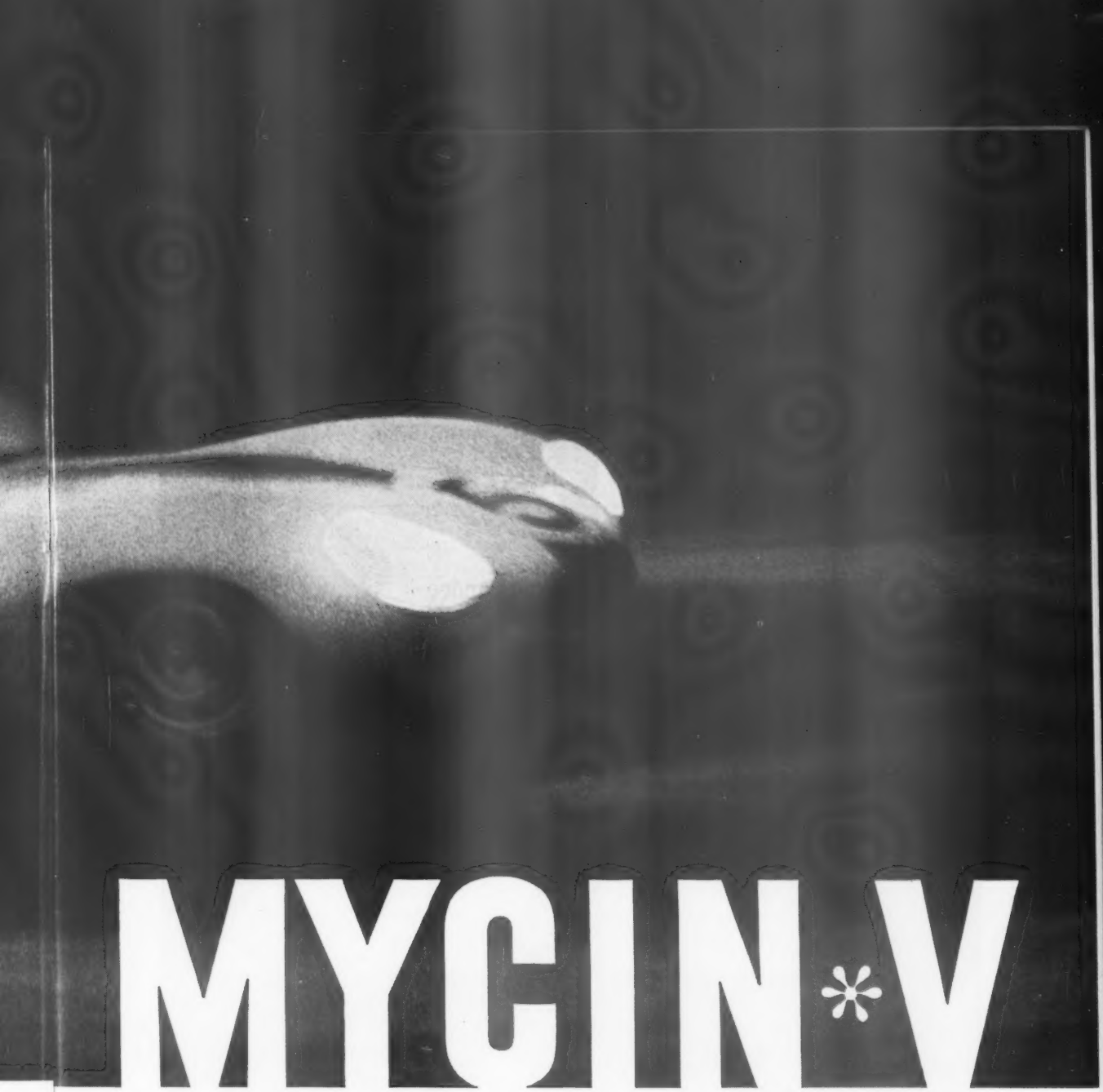

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Journal of the
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EDITORIAL

Medical Education Today

Since the significant date of 1910 and the Flexner report on medical schools and medical education, methods of teaching medicine have changed radically. Programs to reduce didactic hours and increase productive laboratory and bedside experiences have met with increasing success. But a good many problems still remain unsolved. Teaching medicine is costly—in money, in man hours, and in years that the medical student devotes to training. The complexities inherent in clinical teaching have found no one solution. The advantages and disadvantages of full-time, geographical full-time, part-time, or volunteer instructors have been argued and experimented with. There is one common finding—medical teaching, especially in the clinical years, is expensive, and meeting the budget each year is a major preoccupation of administrators.

The most important part of the budget is for salaries for teachers with uninterrupted time for teaching and research. The need for new laboratories, new equipment, and new departments makes necessary new buildings and new budgets. Bedside teaching cannot be done without beds, and responsibility for patient care can only be taught by giving responsibility for patients to students under careful supervision. This requires beds, patients, clinic space, and laboratory and other diagnostic services of increasing complexity. For this building program capital funds must be found.

In 1956-1957 the average cost in the 82 medical schools of the country was more than $3,600 per year per student. This is the cost to the school, not to the student who pays about one fourth of this as tuition. The medical schools therefore must, through income other than tuition, meet three fourths of their operating expenses.

New methods for financing medical education must be devised. The National Fund for Medical Education and the American Medical Education Foundation are helping—the one through contributions from industry and the other through the aroused responsibility of doctors themselves—with grants each year to all the medical schools. These funds are important in meeting day to day needs. The Ford Foundation's grants to independent medical schools have increased endowment income for salaries. Capital funds for plant replacement and modernization are needed urgently. Bills have been introduced into Congress to provide teaching facilities in medical schools. Physicians can help materially to influence the medical education of the future by knowing the problems of the medical schools and helping to solve them.

—Marion Fay, Ph.D.
Dean, Woman's Medical College of Pennsylvania

Report on the Survey of Female Physicians Graduating From Medical School Between 1925 and 1940

Frances Hannett, M.D.

THE DATA IN THIS SURVEY OF FEMALE physicians, which was started in 1953, were compiled from questionnaires developed and circulated by Roscoe Dykman and John M. Stalnaker[1] of the Association of American Medical Colleges. The questionnaires were submitted to approximately 3,000 physicians of both sexes. It was the explicit purpose of the survey to determine the extent to which medical education is utilized by female physicians. In addition to information on this question, the study brought to light many other relevant and interesting facts about women in medicine.

Previous studies usually reported that some eight or nine tenths of female physicians practiced full time, a much higher proportion than the six-tenths who this survey revealed to have been in full-time practice in 1952, or the five-tenths shown to be in full-time practice continuously since receiving the medical degree. However, in no other study had there been an exact definition of "full-time practice" in terms of hours devoted to professional work, nor had a previous attempt been made to estimate the amount of time female physicians had spent in practice since receiving the medical degree.

Former studies had shown lack of agreement about fields of specialization preferred by women, although this may have been affected by the different time periods studied. The specialties shown to be in highest favor in the present study have always been the principal ones, but the order of preference varies somewhat from that previously found. Earlier studies also showed some variation in the number of women certified, but, in general, they are in agreement with the present findings, namely, that about one fourth of women in practice are certified by National Boards.

Dr. Hannett has been engaged in the private practice of psychoanalysis in Chicago for many years. She was formerly a Staff Psychiatrist in the Student Health Service, University of Chicago.

In another recent study, of the 1949-1950 entering classes in medical schools, Dykman and Stalnaker[2] found that 13.5 per cent of the women entering that class withdrew and did not return, as contrasted with 8.2 per cent of the men. Also, 4.6 per cent of the men and 5.3 per cent of the women attended on an intermittent or part-time basis. Thus, approximately only 81 per cent of the women and 87 per cent of the men completed their medical education in the usual four year period. It was also found in that study that female students tended to have slightly lower average grades than the men, especially in the senior year. "While the average scores of these women were higher than the average scores of the men on the verbal section of the Medical College Admission Test, the men did appreciably better than the women on the quantitative section and slightly better than the women in the modern society and science sections of the test."

In general, previous attempts to evaluate the practical use to which women have put their medical training have been deficient chiefly because a control group of men matched on the basis of graduation from medical schools has not been used, the definition of full-time practice has been ambiguous, or the studies have been restricted to particular medical schools or geographical areas.

In the present survey both male and female physicians were studied. A list of all medical school graduates between 1925 and 1940 was systematically selected from the files of the American Medical Association. From this list every other woman and approximately every sixtieth man was mailed a questionnaire. Four successive mailings were made, in order to fol-

low up all nonrespondents. The first mailing in June, 1953, was sent to all physicians selected for the study. Second and third questionnaires were sent out in August and September, respectively, to all those physicians who had not yet responded. A fourth and final attempt at obtaining a response was made in January, 1954. In all, 1,824 women and 1,098 men received the questionnaire. The original list included foreigners who had been educated in the United States and were not practicing in this country. For the purposes of this survey, this small group was excluded, leaving 1,548 women and 1,000 men on the final list. Of these, 1,040 women, or 67 per cent, and 697 men, or 70 per cent, replied.

Estimates were made of the bias resulting from nonresponse, first by comparing respondents and nonrespondents, using data supplied by the American Medical Association for nonrespondents, and second by comparing the returns from the four separate mailing groups. It was found that, although respondents differed statistically from nonrespondents on nearly all items compared and although no one mailing group was representative of nonrespondents, the actual differences between respondents and nonrespondents were not large.

FINDINGS

Age. On the average, the women tended to be slightly older than the men, although they had graduated from medical schools during the same period of time. Thus, 64 per cent of the women who responded were under 50 years of age as compared with 76 per cent of the men. Among both men and women, respondents tended to be younger than nonrespondents, according to data from the American Medical Association files. For example, only 56 per cent of the women not responding were under 50 years of age as compared with 64 per cent of the women who did respond to the questionnaire.

Geography. A higher proportion of female than male physicians practice in large urban centers. Weinfeld,[3] reporting on the "Income of Physicians" in 1951, found this same trend. In our sample, 23 per cent of the women and 16 per cent of the men were working in cities of more than one million population. (These figures include data on nonrespondents from the American Medical Association files; percentages for respondents were slightly lower for both men and women.)

Data referring to the geographical distribution of male and female physicians show, among other things, that the West Coast has a significantly higher proportion of physicians practicing in the region than are trained there. Thus, of the 1,548 female physicians in the sample, 15.6 per cent were practicing on the Pacific Coast, although only 9.5 per cent graduated from medical school there. Corresponding percentages for the men were 4.8 per cent educated on the Pacific Coast and 12.3 per cent practicing there. The Northwest Central region was the largest contributor of physicians to other regions, graduating 9.5 per cent of the women and 11.2 per cent of the men but having only 5.9 per cent of the women and 7.1 per cent of the men practicing within its area.

The Middle Atlantic states educated a disproportionate share of female physicians: 32 per cent of the women graduated from medical schools in this region as compared with only 21 per cent of the men. The Pacific Coast was the only other region where a larger proportion of women than men were educated. However, both these regions also had substantially higher proportions of female than male physicians practicing in their states: 30 per cent of the women practiced in the Middle Atlantic states as compared with 23 per cent of the men; similarly, the Pacific Coast had about 16 per cent of the women practicing as compared with 12 per cent of the men.

Marital Status. Female physicians do not marry as frequently as do male physicians. Over 30 per cent of the women were single, but only 3 per cent of the men had never married. However, a much higher proportion of the women (5 per cent) than the men (0.7 per cent) were divorced. If the number of divorced persons is expressed as a percentage of the persons ever married, excluding the widowed, the difference is even more accentuated, with 8 per cent of the women and only 0.7 per cent of the men in this category.

Marriage after completion of a medical education was the clear trend for both men and women. However, in those instances where marriage had preceded graduation, 19 per cent of the men married as against 15 per cent of the women. These figures are interesting when compared with a sample study made of the 1952-1953 medical students. In this particular group Counts and Stalnaker[4] found that approximately one third of the students attending medical school were married.

About half (48 per cent) of the married

female physicians either had no children or reported none, in contrast to 14 per cent of the men. As a group, the men had an average of 2.2 children and the women 1.2 children. In a recent survey that Barnard College [5] made of its medical alumnae and premedical graduates, 1.3 children were reported as an average for the group studied. In the vast majority of instances (about 93 per cent) both men and women had completed their education before beginning a family.

As might be expected, medical women largely chose medical men as their marital partners (52 per cent), but only 1 per cent of the male physicians married female physicians. Wives of male physicians overwhelmingly were in the housewife category (91 per cent). Nurses and women engaged in other work related to medicine were the second choice of the men (2 per cent); lawyers and other professional men were the second choice of the married medical women (20 per cent). Sixty per cent of the women in the Barnard College survey felt that the combination of marriage and a career was most successful when the partner was also a physician. Businessmen rated low as marital partners, chiefly because of their lack of understanding of the demands made by a medical career.

Premedical Education. Medical women on the average had a more extensive general education than medical men. Sixty-six per cent had secured their B.A. degree or its equivalent as against 58 per cent of the men. That the proportion of female physicians with less than four years of premedical education was only half as large as the proportion for men (16 as compared with 33 per cent) suggests that, by and large, women need to be better qualified for acceptance for professional training than do the men. Twelve per cent of the women held a master's degree as against 4 per cent of the men. Three per cent of both men and women had obtained the Ph.D. The preprofessional education of both the men and women was preponderately in the biological sciences—64 per cent of the women and 73 per cent of the men. Physics and mathematics were next in line, with 23 and 20 per cent of the women and men, respectively, having this type of preprofessional education. (However, one fourth of the women and one third of the men did not report their major field of undergraduate education.) Today there seems to be greater emphasis on the physical and social sciences so that the statistics on current graduates may be different. In line with this trend the medical schools have broadened the basic requirements and in many instances have encouraged a more all-around premedical school curriculum.

Medical Practice. A higher percentage of men entered practice immediately after internship. Eight per cent of the men and only 3 per cent of the women reporting on this item had no postgraduate medical training. There was no significant difference in the duration of postgraduate education between men and women who reported the number of years spent in such training.

A higher proportion of the men (85 per cent) than the women (61 per cent) were engaged in private, partnership, or group practice. Women more often were engaged in salaried work in hospitals, medical schools, industry, or government. (These facts were determined on the basis of response to one item on the questionnaire, and there is evidence to indicate that persons reported their past status as well as their present status. Therefore, these results do not necessarily represent the status of men and women at the time of the survey. About 12 per cent of the women and 2 per cent of the men were not in income-producing work in 1953.)

Approximately one half of both men and women limited their practice to a specialty. Another fifth of both groups emphasized a specialty without limiting themselves exclusively to it. The specialty most favored by women was pediatrics (18 per cent). Psychiatry and neurology, obstetrics and gynecology, internal medicine, and anesthesiology were selected next in that order. Surgery and internal medicine were the outstanding choices of the men. The Barnard College survey found that one half of its graduates were doing medical research or surgical pathology or were practicing general medicine and obstetrics and gynecology. The other half were practicing pediatrics, psychiatry, and internal medicine in that order.

About two thirds of the women and nine tenths of the men spent more than 1,500 hours practicing medicine in 1952. In both these groups the proportion in general practice was higher in the younger than in the older age group. Thus, 28 per cent of the women under 51 years were in general practice, as compared with 20 per cent of those 51 years and older. Similarly, 30 per cent of the men under 51 years and 23 per cent of those 51 years and older were in general practice. The percentage

who emphasized a specialty was higher in the older age group, 23 per cent for the older men as compared with 14 per cent for the younger men and 16 per cent for the older women as compared with 13 per cent for the younger women. Age differences in the proportion of both men and women who restricted themselves to a specialty were not significant, taking into account sample size and possible sample bias.

More men were certified in their fields of specialization than women: 38 per cent of the men and 28 per cent of the women. Among the women holding certificates, those certified in pediatrics and psychiatry led the field (8 and 5 per cent) while, among the men, certification was preponderately in internal medicine and surgery (7 and 5 per cent). In 1946 Lowther and Downes[6] pointed out that the choice of a specialty by a female physician depended as much on the availability of hospital appointments as on personal preference.

The findings now to be reported present the most important data regarding utilization of medical education by women. First of all, it must be noted that for the purpose of this study full-time practice was considered to be 2,000 work hours per year (approximately 40 hours per week). On this basis it is clear that women as a group devote less time to the practice of medicine than do men; however, 99 per cent of the women in the sample stated that they had spent some part of their careers in full-time practice. The most conspicuous difference noted between female and male physicians was the number not in practice: 344 (33 per cent) of the 1,040 women responding to the questionnaire stated that they had spent variable periods of time not practicing medicine, the average women in this group having been out of practice for 4.5 years. Of these 344 women, 276 (72 per cent) were married and most had interrupted their career to rear their children. In contrast, only 6 per cent of the men had spent some time out of practice, and the average amount of time these men were not in practice was 2.1 years.

Only 49 per cent of the women responding to the questionnaire have been in exclusive full-time practice since receiving the M.D. degree, as contrasted with 89 per cent of the men. Only about two thirds of the women as compared with nine tenths of the men practiced at least 1,500 hours in 1952. The latter figures should be interpreted with caution, however, since they are based on three types of activities: income-producing work, volunteer work, and time spent in training. The extent to which other activities were or were not considered is unanswered, and there was no control of several other variables that might be important in this respect.

As already noted, a larger proportion of women than men were not in income-producing work in 1952—13 as against 2 per cent. Of this 13 per cent, approximately one-third had stopped practice between 1950 and 1953 and somewhat less than another third had stopped between 1942 and 1945. Pregnancy, family problems, and physical disability were the chief causes for the interruption or termination of practice among medical women. Physical disability was the primary reason for interruptions in practice by men.

If two assumptions are made—that part-time is equivalent to half-time practice, and that combinations of part-time and full-time practice and "not in practice" were equally divided among these categories—it then is possible to compute the "average percentage of time spent in professional activities since receiving the medical degree." On the basis of these assumptions the average percentage of time spent in professional activities was 79.8 per cent for female physicians and 96.4 per cent for male physicians. (These assumptions may be better for women than men. Also, everything over 2,000 hours per year is called full-time, regardless of the number of excess hours.)

The women as a group earned less than the men, but single women earned more than the married ones. Twenty-one per cent of the women in contrast to 1.4 per cent of the men earned less than $5,000 (before taxes) for full-time work. More married than single women were in this bracket (27 as compared with 10 per cent). Almost 59 per cent of the women and 38 per cent of the men earned between $5,000 and $15,000. Only 8 per cent of the women reported incomes over $20,000, while more than one third of the men received incomes at this level.

By and large both men and women expected to be actively engaged in medical practice 10 years hence, although fewer women (75 per cent) expressed this opinion than men (92 per cent). The majority anticipated that they would be continuing in the same type of activity as the one in which they presently were occupied. Ninty-one per cent of the women and 95 per cent of the men under 51 years of

age expected to be in practice 10 years later. In the older age group (51 years or over) 17 per cent more women than men expected to be out of practice at the end of this period of time (67 per cent of the women and 84 per cent of the men expected to be still in practice). Age was an important factor in the uncertainty or variability of future plans.

In the area of professional attainment the men held a significant lead. Men had more hospital appointments on the average. The same was true for participation in professional societies and number of publications, although the high rate of nonresponse raises some questions about the reliability of these data. Here again the record of the single women exceeded that of the married ones but was still below the men's record.

Choice of Medicine as a Career. The last two questions of the questionnaire were designed "to sample the feelings of physicians about their profession and their attitudes about female physicians." Specifically the questions asked were: "Would you recommend medicine as a career for a son?" "For a daughter?" "Why?"

These questions dealt with intangibles and, as such, the answers cannot be dealt with very satisfactorily by statistics. However, as might be anticipated, women who answered the question were significantly more enthusiastic than men about medicine as a career for a daughter (74 versus 38 per cent). Although the difference was not as marked, a higher proportion of the women also favored a medical career for a son (89 versus 80 per cent). When medicine as a career was recommended, intellectual advantages, spiritual advantages, and job satisfaction were the predominant reasons given for the choice. Some of the comments were: "Commands respect from others," "Working with a worthy purpose," and "Chance to obtain a livelihood in almost any location where he might want to settle."

Three times more men than women (53 versus 18 per cent) would not recommend medicine as a career for a daughter. The chief reasons stated by the men were that medicine did not provide adequate social rewards and facilitated family conflict, and that there was discrimination against women as doctors. The female physicians who did not recommend a medical career for a daughter also listed family conflict and inadequate social rewards as the chief deterrents, but they did not feel that discrimination against them as doctors figured significantly. Complaints from both men and women against medicine as a profession were variously stated as: "Tied down constantly." "Medical study is so exhaustive, you don't have time to develop other intellectual pursuits." "Too all absorbing." Also, many physicians felt that medicine as a career for either a son or daughter should be the personal choice of that individual, depending on the interest shown.

COMMENT

In a number of previous studies it was indicated that about 90 per cent of female medical graduates practiced full time in any given year, but these studies failed to consider the intensiveness of the practice. The present survey reveals that only about 60 per cent of the women practiced medicine on a full-time basis in 1952 and that only about one-half had practiced full time continuously since receiving the medical degree. However, not even the unmarried female physicians devote as much time to medical work as do the men. Nevertheless, Dykman and Stalnaker conclude that women are making a substantial contribution to the nation's health and that, even though medical women do not work as intensively as do the men, they do enough to justify their training.

This survey seems to substantiate the claim of female physicians that on the present basis a medical education for women is not a great social loss. However, it raises a serious question about the validity of the demand for the training of more women as physicians.

The latest publication on "Admission Requirements of the American Medical College,"[7] shows that applications for the class of 1956-1957 totaled 61,471, of which 3,560 (5 per cent) were submitted by women. Of 7,835 accepted into that freshman class, 501 (6.25 per cent), were women. In other words, 11 per cent of the men, or approximately 1 of every 9 male applicants, and 14 per cent of the women, or 1 of every 7 female applicants, were accepted into a medical school this fall.

The question posed by these findings is: Should not our efforts be directed toward interesting women undergraduates in the career of medicine who are best suited for the rigors of this type of education and professional life rather than trying to influence the medical schools to admit more women in general? The Medical College Admission Test cited earlier revealed that female students were somewhat

inferior to male students in every category except in the verbal section of the test. Also, in another study, Stalnaker[8] showed that female medical students tended to have lower average grades than male students.

The selection of medical students in general is a serious problem, not yet solved, for all medical schools. The need is to choose, as students, those men and women who are basically "career-oriented"* persons, whose personality and character structure are such that they will survive and even thrive under the stresses and strains of a medical career.

Since it would seem that women are working up to what they already feel is their capacity, and that this is not equal to that of men, and since women are already being accepted into medical schools in a slightly higher ratio than men, can we rightly press for a further liberalization of the existing admission quotas to medical schools?

ACKNOWLEDGMENT

Statistical work on which this report is based was done by Dr. Evelyn M. Kitagawa, Research Associate, Population and Research Center, University of Chicago.

The author wishes to acknowledge the interest shown in this questionnaire by Dr. Evangeline Stenhouse, Past-President of the AMWA, during whose presidency the questionnaire was initiated and carried through.

*I am indebted to Dr. Helen Gee, Director, Association of American Medical Colleges, for this term.

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Editor's Comments

The trend toward the study of medicine has increased in the past eight years. The following is interesting data from the 57th Annual Report on Medical Education in the United States and Canada, compiled by the Council on Medical Education and Hospitals of the American Medical Association.

Medical school enrollment in the United States, 1956-1957 29,130
Women students enrolled in United States, 1956-1957 1,646
(an increase of 4.6 per cent over 1955-1956)
Women students graduated in 1957 330

Dr. Vernon W. Lippard, in an address before a special meeting, sponsored by the National Fund for Medical Education, held in Chicago, March 5, 1957, pointed out that with an estimated population of 220 million in 1975 there would need to be 2,000 more physicians than are currently graduated annually from medical schools in the United States to maintain the existing physician-population ratio. He indicated that this would necessitate the addition of about 25 new medical schools of the current medium size, with financing essential to their development and maintenance.

Medical schools spent more than 200 million dollars in 1956-1957. Instruction was given to more than 62,000 others in allied fields, such as, nursing, medical technology, pharmacy, and dentistry.

The American Medical Education Foundation, supported by physicians and medical organizations, through 39,892 contributors, gave a total of $1,072, 727 to education, an increase of 40 per cent over 1955. The Ford Foundation gave the schools $3,066,450 last January.

—Frieda Baumann, M.D.

Trends in Medical Education*

Robert A. Moore, M.D.

DURING THE POSTWAR YEARS there have been many changes in medical education. In a few schools the changes have been or are to be so radical that they have been referred to as revolutionary. Some, both within and without the schools, have encouraged this radical approach with the concept that major alterations are long overdue and that medical education has not kept up with other progress.

Although I would not for one moment deny that all aspects of our society need continuous review and modification to meet the present and future, I cannot overlook what has been and what is being done with an evolutionary approach, and I cannot overlook what medical education and research in medical schools have contributed to a healthier and happier life for the American people during the past half century. A program that has supplied to society the modern American physician cannot be in need of complete overhauling.

I wish to review what appear to me to be the broad areas in which evolutionary change is occurring and the concepts and philosophy responsible for the changes. I shall consider briefly five topics: university education, nature of content, co-ordination of content, emphasis on content, and the learning process.

UNIVERSITY EDUCATION

At the end of the last century medical education in large part was independent of universities. Unfortunately some colleges were essentially proprietary trade schools, and most colleges had standards of admission and graduation far below those of a university, even of the university of which they were a part. Medical faculties were semiautonomous. The reaction against this was the now famous Flexner report in 1910. Some colleges went out of existence, others were reorganized, and still others became a part of a university.

Many believe that in the intervening 48 years the medical schools again have drifted away from their parent universities and that we need a reorientation of thinking and of program. Let us see if we can analyze the reasons for this belief. As I see it, there are three major factors: physical separation, financial separation, and intellectual separation—all interrelated factors.

Physical separation has been dictated by the need of the medical school to be located near a large teaching hospital and outpatient department. This has resulted in variable distances between the medical school and the university campus: across the street at Western Reserve, a few blocks in Pittsburgh, two miles at Washington University in St. Louis, and several hundred miles at Cornell University, to name four universities in which I have been a faculty member. From these experiences it is my conviction that physical separation is a factor that affects intellectual cooperation in the same manner as light affects a photographic plate—it varies inversely as the square of the distance.

The trend is definitely to bring the two together. After a long struggle the expanded four year school of Missouri was placed on the campus at Columbia and not in Kansas City. The new schools of the University of California at Los Angeles and of the University of Florida, and the planned school of the University of Kentucky, are on the campus. Stanford University is now engaged in moving its school from San Francisco to Palo Alto on the main campus. In each instance it was

*Presented at Woman's Medical College, Philadelphia, on May 2, 1957.

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necessary to build a new university hospital, and each university showed the vision and courage to accept as an educational obligation a hospital for a medical school as an engineering or chemistry laboratory is accepted as an integral part of other schools.

The financial separation of schools of medicine and universities has resulted from two factors: the high cost of medical education and the growth of support of medicine in the postwar years. Since September, 1917, when Washington University and Johns Hopkins placed a few members of the clinical departments on a true full-time basis there has been a growth of full-time staff. This has resulted in a larger and larger budget for medicine and has introduced another factor—differentials in salary between medicine and the college—which has led to feelings and even resentment. During this same period the availability of individual fortunes to endow universities or parts of them and the attitude of the general public to support medical research have undergone profound change. The net result of these factors has been that university administrators find the medical schools spending more and more money and the humanities and social sciences with inadequate support. Actually the distinction is even sharper: the medical school is supported, but the sister schools of the health profession—dentistry, nursing, pharmacy, and others—are poorly supported, at times more poorly than the college.

The natural reaction of the university administration was to establish the medical school as a segregated fiscal unit and limit the contribution to it from general university funds. In the state-aided universities of Pennsylvania, the legislature did this for the universities by making a separate medical appropriation.

If a university is a balanced group of colleges and schools with the balance and emphasis determined by the trustees, there can be no doubt that what has happened in the last 20 years has in part given control of the balance to groups outside the university. Even within the medical school itself the balance is passing from the control of the faculty. The interest of pressure groups and the availability of money are directing work in mental health, cancer, heart disease, and other categorical fields. This is not necessarily bad, but it is bad if at the same time there are not adequate funds for those who wish to pursue "truth for truth's sake," and not just for a utilitarian objective.

In my opinion, the answer to our quandary is not some arbitrary limitation on funds for medicine, but rather a program of public education and planning. For example, the Association of American Medical Colleges has proposed that all categorical health agencies set aside a certain percentage of their funds for general support of natural science, not only in medical schools but in colleges as well. I would have no objection if some of this went to the social sciences, since I am convinced these will make an increasing contribution to the health sciences. Is there another so-called pressure group that has proposed that some of its money be taken away and given to others?

The intellectual separation of medical schools and universities is probably the most serious of all the separations. I have already spoken of the impact of physical separation on intellectual co-operation between faculties and the resentment because of differentials in salary and in financial support. To be bluntly frank, the really serious separation is the attitude of the college faculty toward the nature of education in the health area. Let me cite an example. In two universities with which I have been connected, it has been proposed that a collegiate school for laboratory technicians be established and include three years of general college and one year at the health center. Some professors in the college have expressed the idea that this would degrade the college and cheapen the bachelor's degree because it would be really vocational education. My answer to this is twofold. First, if you wish to make it so, almost all education, lower or higher, is vocational, because it will ultimately improve the opportunities in the world. The chemistry major frequently goes out to make his living in chemistry. Some music majors go on to be members of orchestras and soloists. Even some English majors become teachers of English. And, second, it is not the content that makes a subject academic or vocational, but rather the manner in which it is approached. Anatomy, microbiology, and even clinical medicine can be just as academic as history, Greek, or philosophy if they are presented to the student in the same way—a search for truth and a curiosity about the unknown. Some years ago a professor of medicine was scheduled to give an address on iron metabolism to the entire scientific staff at Los Alamos, including a group of theoretical physicists and chemists among others. For several days before I heard mutterings about having a "doc" give them a

lecture. After the lecture I heard quite different mutterings: "I had no idea a physician could be so erudite and profound. It was simply superb." To be certain that this will be the effect, we must give increasing attention to selection of faculty and establishment of educational policy and program, and I say this without meaning we have not done so in the past. I would be quite willing to compare the leaders of medical education with the leaders in many other academic fields.

NATURE OF CONTENT

The major point I wish to make in relation to the nature of content of medical education is an extension of the last point on the academic approach to medical science. It is the contrast between the approach through facts and the approach through principles and processes.

Let me illustrate this with a true story. About a year ago a medical educator from a European country stopped in Pittsburgh to visit with me. He was greatly concerned about a visit to another school of medicine in the United States, which had recently changed the entire curriculum and approach to medical education. Finally, he said, "You know, they said it is possible for a student to have graduated without having seen a patient with acute appendicitis." He was even more shocked at my answer: "I would not be concerned about that. I am sure that no student there would graduate without a knowledge of the anatomy of the abdomen, of the general and local effects of infection, of the signs and symptoms of irritation of the peritoneum, and of the effects of inflammation of a segment of the intestinal wall. I am sure that the student would recognize an acute appendicitis, and I suspect he would recognize it more accurately than would one who learned only the specific signs and symptoms of acute appendicitis." My visitor left unconvinced.

Quite aside from the theoretical support of this academic approach, there are practical and realistic reasons why we must look increasingly from the viewpoint of principles and processes. The accumulation of factual knowledge in the medical sciences has been so tremendous that no individual can any longer hope to remember even a small part. Further, the objective of all education is to provide an understanding not only of the present but also the future. All must make sure we do not educate young men and women for a world that will not exist. Again let me cite an example. When I went to Washington University in 1939, Carl and Gerti Cori were carrying on research on the basic processes of carbohydrate metabolism, and they included discussion of these processes in the freshman couse in biochemistry. They always pointed out that despite careful study it was not possible to relate these enzymatic processes for storage and burning of carbohydrate to insulin or diabetes, or in fact to any disease condition in man. I do not know, but I suspect some medical students were not impressed with this attention to nonutilitarian items. Ten years later, as you know, it was proved that insulin did effect these enzyme systems. The students who graduated during this 10 year period had the basic knowledge to appreciate the new fact when it was announced, and thus assimilate it into their knowledge. If they had not learned of these basic processes, the new fact would have been isolated and utilizable only on an empirical basis.

Let me cite another example. For many years while I was active in teaching, I would tell the students that I could write two pages in answer to an examination question on the signs and symptoms of an infectious disease before I knew the exact disease I was describing. This may sound a little exaggerated, but stop and think for a moment. The only thing I will concede is that when told the name of the disease I might need to insert a few qualifying adjectives and adverbs and add a few specific signs and symptoms. All infectious diseases produce signs in the patient of fever, fatigability, muscular aches and pains, headache, loss of appetite, disturbance of intestinal motility, increase in pulse and respiratory rate, and other general effects of the growth of bacteria and viruses in the body. The intensity and quality of each of the general signs and symptoms will vary with the specific disease. Add to them rose spots, crepitation over the cecum, and leukopenia and the diagnosis is typhoid fever, or add to them sudden onset, rusty sputum, and dullness over a lobe of the lung and the diagnosis is lobar pneumonia.

Is the future physician not better prepared to meet all contingencies if he or she understands processes rather than facts? Let me use an example from the field of mathematics. The fact is that the square root of a number is that number which, multiplied by itself, gives that number. With the fact and an electric

calculating machine, the individual is helpless. But a part of the theory of numbers is that the square root of a whole number is the number of odd integers that can be subtracted from the whole number and leave zero. With a knowledge of the theory of numbers at hand, it is a simple matter to extract a square root on a calculating machine, with logarithmic tables, or by hand. The difference is that facts alone limit the horizon, but, with an understanding of the theory, the possibilities are limitless. This approach to the nature of the content of medical education is a reflection of my comments on university academic education. One of the characteristics of academic education is that the subject or topic is included for its own sake and not just because it will be needed later for a practical purpose. If it is utilizable, so much the better.

There are many methods to accomplish these objectives and no one method is a sole answer. Some may revise the curriculum, others may reorient the approach, and still others change the viewpoint. But, as with all aspects of education, nothing will change unless the basic philosophy of the faculty changes. A faculty may make any number of high-sounding announcements, but the student will not change his viewpoint if the professor of "xology" insists on a regurgitation of every last detailed fact in his examinations.

CO-ORDINATION OF CONTENT

In all phases of education there has been increasing concern over duplication of effort and the co-ordination of the various phases and courses. Medical education has been no exception to this concern, if for no other reason than that the period of training to be a physician has been progressively lengthened so that today the average young board diplomate is at least 31 years old. After age 6 there are eight years of grammar school, four years of high school, four years of college, four years of medical school, and five years of postgraduate training.

Up until recent times the only consideration has been to add years, with no thought of subtracting years or adjusting one program in relation to improvements in other programs. For example, the internship was introduced to provide actual clinical experience at a time when the junior and senior years were largely devoted to didactic lectures. Today, these two years in medical school are largely a supervised clinical clerkship equal to, if not superior to, most internships. Yet, little attention has been given to the continuing real need of the internship for educational purposes in contrast with the need for service in hospitals.

Others have expressed concern about the wasted time in the American system of education. Centuries ago someone decided formal education of children should occupy about eight months, or 32 weeks each year, leaving four months for vacation, most of it in the summer. The principle has been accepted regardless of the level of education and holds true for a child of 6, an adolescent of 16, or an adult of 26 years.

Still others have given attention not so much to the total time as to a closer co-ordination of the content of the educational program. For example, the question has been raised whether the student would not have a better understanding of the kidney if he learned all at one time the anatomy, biochemistry, physiology, and pharmacology of the kidney rather than the anatomy in November, the biochemistry in February, the physiology in April, and the pharmacology the following November. Another example would be the simultaneous learning of the microbiology and pathology of the infectious diseases.

Another aspect of this aproach to co-ordination is related to the clinical instruction. Those interested in this approach reason that the clinical experience in medical school is too limited to only one aspect of the practice of medicine—hospital practice with the physical ills of man. The student physician under these conditions does not see and study the social and environmental factors of the home and workplace, which influence health and disease; nor does he follow the patient from health to disease and back to health; nor does he see and study the whole human being as an individual. Instead, on one day he sees the eyes of a patient and on another day the liver of another patient. Corrective steps have included the assignment of families to the freshman medical student, inclusion of a home care program as a part of the clinical experience, and rearrangement of the outpatient service so that the same student cares for the same patient regardless of the specific clinic or service.

A composite educational program from the various elements that have been used or that are planned for one or more schools can be put together as follows: (1) two years of liberal arts education with a minimum of natural

science; (2) one year of transition from college to medical school; (3) four years of medical school to include the internship; (4) reorientation of the content to revolve about the human body rather than about scientific disciplines; (5) lengthening the school year to at least 40 weeks, except for the last year, which would include 48 to 50 weeks; (6) assignment of a family to each student to follow through medical school; and (7) a co-ordinated outpatient program to include home care.

My own reaction to all this ferment for co-ordination is in general favorable. I am convinced we must shorten the years required to train a physician and must think more of the total man in both his physical and social environment. On the other hand, in our quest for co-ordinated effort we must not lose sight of the basic objectives of university academic education. The more we co-ordinate with health and disease in mind, the more we tend to vocational education. I agree that there are no real incompatibilities between co-ordinated and academic education, but, the more co-ordination there is, the greater the care that must be taken to preserve "truth for truth's sake."

EMPHASIS ON CONTENT

As medical practice developed during the medieval ages the only physician who could afford any real hope of cure was the surgeon, and it was natural that, as modern medicine emerged at the end of the Eighteenth Century, surgery and the surgeon should occupy a dominant position. It followed that as medical science evolved during the Nineteenth Century, the handmaiden of surgery, anatomy, should become the dominant preclinical science. Both of these positions were related to the emergence of four concepts, which I shall term structural, physical, biological, and curative, as the themes of medicine in the first part of this century. In the last 25 years four contrasting themes have come into prominence. These I shall designate as functional, mental, behavioral, and preventive.

The viewpoints of structure and function are seen not only in anatomy but in my own subject of pathology. There is a striving to relate structure to function and to change the concepts of structure from a static to a dynamic approach. Histochemistry is an expression of this, in that the anatomist or pathologist in experiments attempts to localize chemical alterations to a specific structural part of the cell or tissue. In both anatomy and pathology there is a trend to the use of experiments in the regular course. If the student can watch a cancer of the skin develop after painting it with benzpyrene, he has a much clearer idea of the natural course of disease. Or, observations of the process of inflammation in the omentum with dilatation of vessels and migration of cells mean far more than a study of fixed tissues, even at different stages. In clinical medicine the tremendous advances in clinical laboratory work are a reflection of this same trend. Pediatrics came of age in the period of 1910 to 1920 when many of the leading pediatricians had fundamental training as chemists and applied their knowledge to health and disease in children. More recently, surgeons and surgery have followed. Greater understanding of salt and water metabolism has saved as many if not more lives than refinements of actual surgical skills. One of the greatest surgeons of this century, who just died (Evarts Graham), related most of his contributions to clinical surgery, and they were large and fundamental, to his early study in the chemical laboratories at the University of Chicago.

Now, let me turn for a moment to the physical and mental viewpoints. As modern science replaced the concepts of the four humors and their influence on physical disease, there was not equal progress in the "possessed of the devil" concept in mental disease. After the lead of Pinel the mentally deranged were given better comforts of life, but still little thought was given to an approach similar to that in other fields of medicine. Just 25 years ago my own course in psychiatry consisted of two hours a week during part of the senior year visiting a state hospital. One hour was devoted to a lecture in the traditional descriptive sense and one hour to observing, not studying, large numbers of patients with the given disease. So far as I can recall, the term "psychosomatic" was not mentioned. Ten years later, when I joined the faculty at Washington University, the department of psychiatry had just been reorganized on a full-time basis, with John Whitehorn, Dave Rioch, and Carlyle Jacobsen. Courses in psychobiology and psychopathology had been introduced in the preclinical curriculum.

Much the same situation obtains in the viewpoints of biological and behavioral science.

My own education dates from one day and one conference. Ed Gildea, Professor of Psychiatry, came to the dean's office one day with a recommendation that a cultural anthropologist be added to the staff of the department the following year. As a physician steeped in the traditions of biology and the physical approach, my natural reaction was, "Why should we have such a person? He belongs with the social scientists in the College." When Dr. Gildea had finished an hour later I was on the way, and have been moving forward ever since, toward the concept that medicine is as much a social and behavioral science as it is a biological science.

The last of the four viewpoints that I wish to discuss is curative-preventive. This one is probably the best known and the one about which there has been the most talk, but its impact on undergraduate medical education is still to be realized. I like to think of the next step after prevention, and that is "preservation of health." This is the positive approach rather than the negative. Health care must move to the point where people consult their physician when they are well, not wait until they are ill.

Practically everyone will acknowledge the validity of these four new viewpoints—functional, mental, behavioral, and preventive—but let us be honest with ourselves about how far they have permeated into undergraduate instruction. I am thinking not only of the number of hours in the schedule but also of the content.

How many slides used in the histology and pathology courses are not static situations stained with a classical nuclear–cytoplasmic stain? How many courses in the 83 medical schools in anatomy and pathology use experiments, or even living demonstrations, to convey the idea of dynamic change in structure with changing states? How many hours of preclinical instruction are devoted to preparation of the student to understand the mental and behavioral aspects of health and disease? I believe that we need another major preclinical department to do just this. It would bear the same relation to psychiatry that anatomy used to bear to surgery and consist largely of psychologists and anthropologists. Gradually, it would come to support other clinical subjects. Aside from the work in pediatrics, how much time or attention is given to the preservation of health or prevention of disease? In how many schools do students visit the homes of their patients to observe the factors of environment and interpersonal relations which initiate and perpetuate disease (and I am thinking not just of the usual public health factors such as water supply and sanitation)?

THE LEARNING PROCESS

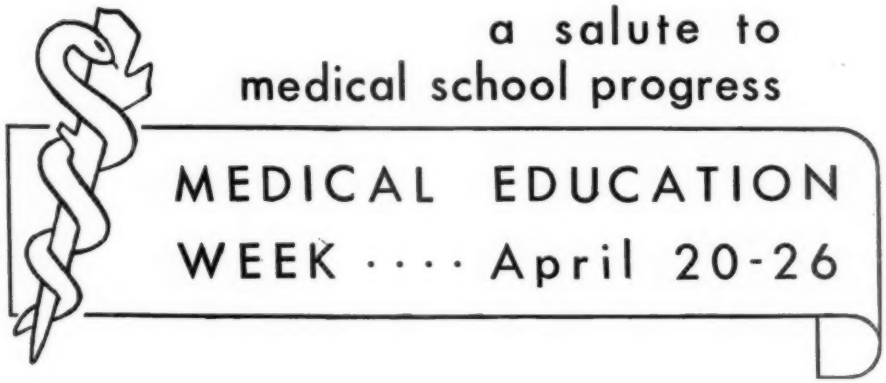
In all the discussion so far I have tried to avoid the word "teaching" and emphasize the word "learning." Far too much of our education at all levels is focused on teaching. All a faculty can hope to do is to create an atmosphere in which the student has an opportunity to learn. There are many techniques for this; let us consider a few.

First, there is the contrast of didactic and laboratory or clerkship instruction. There are many things in this world we can learn only by the written or spoken word, but if there is some way in which the student can learn by "doing" it is far better. This is, of course, the basis of all laboratory and clerkship instruction in medicine. We could teach the student that this patient with pneumonia has a white blood cell count of 20,000 per cubic millimeter, with 85 per cent polymorphonuclear leukocytes, but if he actually makes a count and learns it himself he is far better off. Further, if the lecture is to be used, it should be employed to develop concepts and philosophies and not to detail facts, which the student can learn far more easily by reading. And, the lecture should not be used to "spoon feed" the student in preparation for the laboratory exercises. In my own subject of pathology I regard it as poor pedagogy to project each of the slides to be studied and tell and show the student what to look for. It is far better to read about what is to be seen and then, with already available knowledge, look for the various items in the slide or specimen. If it cannot be identified, then is the time to ask for help—not before a self-attempt has been made. I like to think of the learning process in medicine as analogous to von Baer's law, that is, that embryology recapitulates phylogeny. Each fact and process was once upon a time observed for the first time by an inquiring mind. That is the phylogeny. As each student again makes this same observation, original to him, his own embryologic development is recapitulating the phylogenic development. He must of course have some help as he is doing in four years what has taken centuries, but,

after all, the human embryo in nine months recapitulates milleniums of phylogenic maturation without help except for that given through the umbilical cord.

A second technique I wish to discuss is that leading to the concepts of comprehensive medicine. I have already spoken of several facets of this. I have no doubt that specialization has made a major contribution to the high level of health care and of medical education, and I believe that specialists should make up faculties of medical schools; however, I also believe that we cannot have students learn segments of knowledge totally unrelated to each other, nor can we expect each student to be a specialist in each field of instruction. These ideas are not incompatible. Methods for creating an atmosphere for learning have and are evolving. Joint clinical conferences, the rearrangement of the outpatient service to have the student follow the patient, co-ordination of learning along vertical lines, and many others are yielding benefits.

We must apply the same originality and imagination to research in educational methods as that which we use in our research on scientific subjects. There are many signs that we are doing this in individual schools and at the national level. The teaching institutes of the Association of American Medical Colleges have already had an impact and there are several more institutions to be held.



"In this great era of American medicine, it is fitting that we set aside a special week each year to consider the work of our medical schools. Progress has been made in the expansion of medical school enrollments, in research and community services, but during the current year I hope we can take additional steps to strengthen medical education. To this end, I have again asked the Congress to enact pending legislation to provide federal assistance for the construction of medical teaching facilities. Our people are well aware of the role of modern medicine in this national health structure, and I know they will support, by private and public means, the continued growth of medical education in the country."—*President Eisenhower.*

An Experiment in Teaching "Medical Care" to Medical Students

Helen M. Wallace, M.D., Sigmund L. Friedman, M.D.,
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FROM THE VIEWPOINT of the administrator of a public health program or of a hospital, a fundamental health problem is the delivery of high-quality "medical care" to those who need it. As yet in this country there has been no agreement on methods of solution. Physicians, present and future, are in a unique position to make a major contribution toward improvements in the distribution of medical care. Further, they have a responsibility in this area that cannot be successfully delegated to other interested groups.

Because of the belief that physicians should be soundly oriented in methods whereby medical care is provided, the question arose at the New York Medical College, as it has elsewhere, of how to introduce this topic effectively to medical students. In planning the course, considerable discussion took place in regard to the most appropriate timing of the course, as well as its length, scheduling, and methods of presentation. The course content was determined by our desire to present as well-rounded a picture as possible. Thus, we attempted to introduce as many aspects of the issue as possible to future physicians. It was finally decided to make the presentation to first year students within a one week period by means of guest lecturers. It was recognized from the first that this would be an "experimental" course; that, in other words, its various aspects would be reviewed carefully after completion and such changes as seemed advisable would be planned for and introduced the following year.

The purposes of the course were: (1) to introduce the general topic of medical care, (2) to present facts on the number and types of physicians in our country, (3) to stimulate thinking among medical students about the need for sound postgraduate training and the quality of medical care, and (4) to present a representative sample of present methods of delivery of medical care to the people.

This report will present our analysis of the medical students' reactions to the course.

PLAN AND CONTENT OF THE COURSE

The course on medical care was given in 16 one hour sessions, concentrated in one week, in April, 1956—in other words, toward the end of the first year in medical school. Each one hour session consisted of a 45 minute presentation by a guest authority on a particular subject; an additional 15 minutes were allotted for questions from the students. A pre-

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TABLE I
Students' Estimates of New Knowledge Gained

Subject	No.
Medical care program	30
Trends in medical care	22
Hospital care and administration	16
Private practice	15
General practice	12
Patient-physician relationship	10
Specialization	10
Medical licensure	8
Role of the physician	8
Group practice	6
Socioeconomic relationships of medicine	6
General information	6
Ideals and ethics of medicine	4
Practical aspects	3
Medical distribution	2
Medicolegal aspects	2
Miscellaneous	12*

*Includes one each of the following: problems of new physician; history of New York Medical College; "life and trials" of physician; complete re-education on physicians, hospitals, and insurance; role of health department; facts regarding medicine and practice; medical profession; "black side" of medicine; importance of careful records; mental illness; factor in good practice; and "politics."

pared bibliography was distributed to the students on the first day of the course.

The topics presented were: medical manpower and distribution, broad aspects of medical care, the role of the hospital in medical care, the role of the health department in medical care, the sociological aspects of medical care, the economic aspects of medical care, the quality of medical care, the patient-physician relationship, private practice and the family physician, medicolegal aspects of medical care, licensure of physicians, and four examples of medical care programs currently in operation.

Toward the middle of the course, a questionnaire form was distributed to the entire class. With the assistance of the class officers, the replies were collected from 121 members (95 per cent) of the class after the course was completed. The study questionnaire contained a specific request that the form not be signed, and as a result all forms returned were completely unidentifiable.

RESULTS OF THE QUESTIONNAIRE

General Opinion and Reactions. The first question asked on the study form was: "Did you enjoy the course in medical care?" Of the 121 students, 116 (95.8 per cent) enjoyed the course, 2 (1.7 per cent) did not, 2 (1.7 per cent) expressed no opinion, and 1 (0.8 per cent) stated that the course should be given later in medical school.

The second question asked on the study form was: "Did you learn anything new in the course in medical care?" Of 121 students, 118 (97.5 per cent) did and 3 (2.5 per cent) did not.

New Content Learned. The next question asked was: "If you learned anything new in the course, what was it?" There were 172 replies (items listed) to this question. The largest single number of replies concerned new knowledge gained about medical care programs, trends in medical care, hospital care and administration, private practice, general practice, patient-physician relationship, and specialization (table I).

The subjects most liked by the students are shown in table II. They include the patient-physician relationship, broad aspects of medical care, medicolegal aspects, role of specialty boards and specialization, licensure, and general and specific medical care plans.

The next question asked was: "What subjects did you feel were helpful?" In selecting this question for inclusion in the study form, it was realized that the students might not necessarily be in a mature enough phase of their development to provide meaningful answers. Nevertheless, the question was considered of such importance and interest to the faculty that it was included. The answers include: "all of them," licensure, patient-physician relationship, "most of them," broad aspects of medical care, medicolegal aspects, the various medical care programs. Blue Cross and Blue Shield plans, and the role of specialty boards and specialization. It is evident, in comparing the two columns of replies in table II, that the subjects most liked by students were not necessarily those that they felt were most helpful, although, in general, there was a trend in this direction.

The students were then asked to list any subjects given in the course that they thought would not be helpful. Table III shows that the economic and sociological aspects of medical care were the topics selected.

SUGGESTIONS MADE BY THE STUDENTS

The students were asked to make suggestions for a future course in medical care for first year medical students in the event that the

TABLE II
Subjects Favorably Received and Considered Helpful

Subject	Favorably Received	Considered Helpful
Patient-physician relationship	44	19
Broad aspects of medical care	34	12
Medicolegal aspects	20	11
Role of specialty boards and specialization	16	10
All subjects	16	30
Medical licensure	15	23
Health Insurance Plan of Greater New York	14	11
Medical care programs	12	11
Private practice and the family physician	8	7
Role of hospital in medical care	7	12
Group practice	6	4
Medical manpower and distribution	5	5
Blue Cross and Blue Shield plans	4	11
Quality of medical care	4	3
Hospitals in general	4	0
Private practice	3	1
General practice	3	1
Role of health department	2	4
Changes in medical practice	2	1
United Mine Workers	2	3
Trends in medicine	2	2
Sociological aspects	2	3
All but economics	2	2
Most of them	2	13
Miscellaneous	8*	4†
Total	237	203

*Includes one each of the following: "pros and cons" of medical care plans, noninsurance subjects, medical care, medical history, physician in practice, role of physician, relationship of physician and hospital, and "no preference."

†Includes one each of the following: medical history, mental illness, planned medical program, and medical practice.

course would be repeated the following year. This question was subdivided into: (1) new topics, (2) deletions from this year's course, and (3) other suggestions.

New Topics. Table IV shows that the students suggested as new topics such subjects as: general practice; the rural physician; medical economics, as exemplified by such items as income, taxes, salaries and expenses, fees, overhead, the costs of practice, and the cost of equipment and where to buy it; medicine in the armed forces; internship and residency (types, and methods of securing); medical ethics; and general practice versus specialization. Some of the new topics suggested are now covered in the later years in medical school.

Deletions. Table V shows the deletions suggested by the students. Medical economics as presented in the course was the most frequent topic suggested for deletion. The students also suggested that the lecture on sociological aspects be deleted and that less time be spent on medical care programs.

Other Suggestions. There was also a wide variety of other suggestions (table VI). One

TABLE III
Subjects Considered Not Helpful

Subject	No.
Economic aspects	44
Sociological aspects	17
Role of specialty boards and specialization	4
United Mine Workers	3
Role of hospital	3
Hillman Health Center	2
Role of health department	2
Quality of medical care	2
Health Insurance Plan	2
Miscellaneous	7*
Total	86

*Includes one each of the following: medical manpower and distribution, licensure, Blue Cross and Blue Shield, repetition regarding medical care programs, "few," "none, but some duplication," and "propaganda of all types."

TABLE IV
New Topics Suggested by Students

Subject	No.
General practice	22
The rural physician	20
Medical economics	18*
Medicine in armed forces	15
Organization for delivery of medical care	11
Internship, residency	10
Medical ethics	10
General practice versus specialization	7
Group practice	6
Setting up and conduct of new practice and offices	5
World Health Organization	3
Industrial medicine	2
Epidemiology of disease	2
Miscellaneous	14†

*Includes income, expenses, fees, overhead, costs of practice, salaries, cost of equipment, where to buy equipment, and taxes.

†Consists of one each of the following: administrative medicine and the future physician; preventive techniques, effects, and problems; administration of medical schools; administration of health problems in prisons; history of public health; community agencies available to physicians; paramedical services on the medical team; the county medical society; women in medicine; statistics on physicians (age at death, income, and family); physician-patient relationship; medicolegal aspects; pharmaceuticals in medical care; and public health as a profession.

frequently made was that relating to the mechanics of scheduling the course (that is, spreading it over a longer period of time as opposed to compressing it in one week; length of the individual sessions; and seating arrangements). Other suggestions included: more material on the organization and delivery of medical care, patient-physician relationships, legal aspects, and on types and methods of practice.

DISCUSSION

From the unsigned questionnaire forms returned by 95 per cent of the first year class of medical students, there seems little doubt that the experimental course in medical care was of interest, was liked, and in general was considered helpful by them; 95 per cent of the students enjoyed the course and 98 per cent learned new facts. It may be of some interest that the class selected medical care programs as the area where new knowledge was gained most frequently and as one of the areas liked, although only 4 of the 16 sessions were devoted to specific medical care programs. Private practice, general practice, and specialization also were three topics frequently selected as areas in which new knowledge had been learned, undoubtedly reflecting the interest and intent of the class to go into the private practice of medicine. It is gratifying that the lectures on general aspects of medical care and the patient-physician relationship both presented new knowledge and were liked by the students. These topics, with the addition of those of licensure and medicolegal aspects, were also stated to be the most helpful.

The two topics stated to be least helpful were the economic and sociological aspects of medical care (table III). That this was more a reflection of the individual presentations than a lack of interest in the over-all subject may be due to the fact that the subjects were given more from the standpoint of the specialist in these particular areas than from that of the practicing physician. This interpretation seems to be substantiated by some of the new topics suggested by the students and liked (table IV). This would indicate that the student, at least at this stage of his development, is more concerned with his individual economics than with economics of delivery of medical care to the community.

The desire to learn more about the practice of medicine, especially about general practice and practice in rural areas, is also shown in table IV.

This experiment in teaching constitutes a short-range study. There seems to be little question that the course provoked discussion and ferment among the first year students; during the course, the students commented that they had many lengthy discussions among themselves during their lunch hour.

One of the unanswered questions in this experiment is whether a course in medical care should be given early in medical school (in the first year) or later (the third or fourth year). Another unanswered question is whether the

TABLE V
Deletions Suggested by Students

Subject	No.
Medical economics as given	23
Sociological aspects	7
Medical care programs (some)	5
"Too much on medical care programs"	3
"Less on role of hospital"	3
Miscellaneous	5*
None	7
Total	53

*Includes one each of the following: United Mine Workers, Hillman Health Center, health department, "repetitions," and "propaganda."

TABLE VI
Other Suggestions and Comments Made by Students

Subject	No.
Mechanics of scheduling	19
"Course good"	9
"More on sociological and economic aspects and organization and delivery of medical care"	9
"More on patient-physician relationship"	6
"Less repetition"	5
"More on legal aspects"	4
"More on type and methods of practice"	4
Comments on individual lecturers	4
"Course good but give later in medical school"	3
"More on Health Insurance Plan"	2
"More on medical licensure"	2
Miscellaneous	10*

*Includes one each of the following comments: "should have small discussion groups with faculty at end of course"; "too many biased, conflicting opinions"; "discouraging aspects might be explained more" (hospitals, need for specialization); and "discouraged by future." Includes one each of additional material on: internship and residency, rural medical care, chronic disease, armed services, ethics, and public health (city, county, and federal).

course would yield better results if it had been spread out over a longer period of time; theoretically, and from experience in other areas, this would appear to be so.

One observation of interest must be noted: the large number of intelligent and thoughtful questions at the end of each lecture, which gave evidence of knowledge even in areas in which the majority of students had no personal experience.

In retrospect, therefore, the authors believe that it might have been more effective to have scheduled the course once a week over a 16 week period and to have set the duration of each session at one and a half hours rather than the customary one hour, thus allowing more time at the end of each session for informal discussion and questions. Finally, the authors believe that it would be most desirable to have a follow-up series of seminars held by the faculty with small groups of students after the course of lectures is completed, to permit free discussion, to allow the students to raise additional questions, to give the faculty opportunity for further interpretation, where indicated, and to clarify different points of view expressed by the lecturers.

SUMMARY

This report describes the short-range results of an experiment in giving a course on medical care to first year medical students. According to the unsigned study form filled out by the students, the course was of interest and was considered helpful to them. The students considered topics such as medical care programs and those related to private practice to present the most interest and new knowledge.

Pediatric Education

Pediatrics as an independent discipline is a relatively new concept in the Western world—and is newer still in most tropical countries. It is, then, with great interest that one welcomes an authoritative report by a widely representative WHO panel of experts on the subject of pediatric education, which should be carefully studied by all concerned with the teaching of any aspect of health.

While suggesting the main guidelines of the discipline, the Report of the Study Group on Pediatric Education emphasizes the necessity of varying course material, curriculums, and teaching methods to suit local problems and facilities. The Report discusses the whole scope of the field: diagnosis, treatment, and prevention of disease in infancy and childhood, physical and physiologic aspects of growth, infant and child nutrition, methods of examing children and handling their parents, problems of the handicapped child, and aspects of social medicine.

"Perhaps the only minor criticism is that, while due emphasis is given to the need for variation to suit each local situation, the necessity—especially for the tropical pediatrician in a non-Western culture zone—of receiving instruction in elementary socio-anthropology is not noted. The need for this is, in fact, very great, as so much of his subsequent work will be enmeshed with local practices and attitudes, especially, for example, with regard to such fundamental topics as infant feeding and child rearing." (*J. Trop. Pediat.* 3:49, Sept., 1957.)

A Look at Medicine in Russia

Alma D. Morani, M.D., F.A.C.S., F.I.C.S.

IN 1936 I SPENT SEVEN DAYS IN Moscow and Leningrad learning about medicine as it is practiced in that country. On Nov. 1, 1957, I attended a reception in Washington, D.C., honoring the six Russian women physicians visiting our country. From observations inside Russia and from conversations held with two of the visiting physicians, I gathered the following data, which should help us understand medicine as it is practiced in Russia today.

TRIP TO RUSSIA

Medicine is a woman's world in Russia, 75 per cent of the physicians being women. Women also hold many of the key positions: the Minister of Health, many deans of medical schools, medical directors of hospitals, and chief surgeons are women. They are a hard-working group doing good work in drab, old hospitals with limited equipment. We were impressed especially with their dedication and earnest labor.

Russia today has 80 medical schools, turning out 23,000 physicians a year This can be compared with the United States where 82 schools turn out 7,000 doctors per year, or about one-third as many. Admittedly, the total training of six years given a Russian medical student is adequate if not as broad in scope as medical training in the United States. Russia today has 330,000 doctors, or an average of about one doctor for every 650 people (their aim is to have one doctor for every 300 people). We have 200,000 doctors, or about one for every 800 people. Through this tremendous production of medical manpower, Soviet Russia hopes soon to conquer all disease. There is great emphasis on research, especially on burns, shock, and industrial medical problems. Mass inoculation for several infectious diseases is carried out.

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The Russians believe that our patient-physician relationship is highly overrated. Their medical care, even though adequate, lacks any personal touch, and we saw no evidence of luxury care of privileged patients, although we know that such exists. Patients are ambulated early, and all are treated alike in large crowded wards.

Russia has relatively few general hospitals but many special hospitals. They concentrate their equipment for treating each disease in the hospital specializing in that disease, thus making as efficient use as possible of that equipment as well as of the specialist and his team. An abundance of rest homes and rehabilitation centers also exists.

The medical library in Moscow is tremendous. A corps of interpreters reads every medical publication in the world, condenses the articles, translates them into Russian, and keeps a constant up-to-date file for reference, which is available to any physician.

Most physicians seemed to be respected and well-informed. All are employees of the state and are paid a small salary; it would be a dangerous delusion to underestimate the efficiency of this state system of socialized medicine. While the hospitals are crowded and the equipment often outdated, the physicians seem to be doing creditable work and are rendering at least adequate medical care. All are cost-conscious, therefore making the very most use of all their materials, using just enough bandages and medicine, for example, and being careful not to waste a scrap of anything. In most instances wounds are not covered by dressings.

Obstetrics in Russia is particularly well organized, stressing practicality and natural childbirth methods rather than esthetics. Weekly instruction classes are held during the prenatal period. All normal deliveries are handled by devoted midwives, who call for a physician only if complications arise. This system permits the physician to concentrate on more pressing cases. Babies are not circumcized, and breast feeding is strongly urged. Milk stations are provided in most hospitals.

Seldom is anesthesia given during delivery or episiotomy, but the basic care given to mother and baby satisfies all practical needs.

Abortions in Russia are legal and may be performed during the first three months of pregnancy just for the asking. After the first trimester a board of three doctors must pass on the validity of the medical reason for one. Because of this system the incidence of pelvic infection is very low. Dilatation and curettage are frequently performed with sedation but no general anesthesia.

Another aid to the busy physician is the use in Russia of a group of assistant doctors. Questioning revealed that feldshers obtain a degree after a three year medical training period that permits them to be substitutes for physicians in emergencies or in rural areas where physicians are scarce. Feldshers prescribe and administer simple medicaments, give injections, and do minor surgery. In some hospitals feldshers do the work we assign to interns and residents, relieving the fully trained physician for more important duties. The inspection of four Russian hospitals also revealed that nurses and attendants are plentiful and that trained nursing personnel perform actual bedside nursing, being relieved of paper work by clerks.

Surgery in Russia seems to be well advanced, with emphasis currently on cardiac and pulmonary surgery. While lacking our refinement in equipment and technique, the results are fair by comparison. A great deal of surgery is performed on patients with cancer, and there is great interest in plastic and reconstructive surgery. In line with the stoic personality of the Russian people, very little general anesthesia is used and major surgery is performed under local or regional nerve blocks. Since most Russians consider it their duty to donate blood, there is no shortage of donors or blood banks, and even blood from cadavers is used in emergencies.

Mental illness, which has received so much publicity in this country recently, is considered by the Russians to be a physiological brain disorder and is treated with insulin, electric shock, and deep sleep therapy. At present, mass psychotherapy and tranquilizing drugs are in vogue. They have a quick solution for chronic alcoholics, drug addicts, and sexual criminals—a trip to Siberia and concentration work camps to provide a change in environment.

In looking at Russia from the outside, so to speak, the Communist party has created a new social and political order and has stirred up the life of every Russian inhabitant. With higher living and social standards, the people are rapidly raising their scientific and cultural levels. They display an intense feeling for the state and are willing to make sacrifices and exceptional efforts to build up a better system of life. We should not underestimate them.

RUSSIAN DELEGATES

The reception for the delegation of distinguished Russian women physicians visiting the United States in November was given by The National Academy of Sciences—National Research Council in Washington, D. C. The members of the Russian delegation were:

E. A. Vasyukova, head of the delegation, professor, and is doctor of medical sciences, director of the Institute of Experimental Endocrinology of the Ministry of Health of the USSR in Moscow.

A. K. Shubladze, professor and doctor of medical sciences, is laboratory head of Ivanov Institute of Virology of the Academy of Medical Sciences of the USSR in Moscow.

M. N. Fateyva, professor and doctor of medical sciences, is head of the Radiology Clinic of the Institute of Labor Hygiene and Occupational Disease of the Academy of Sciences of the USSR in Moscow.

N. A. Dzhavakhishvili, professor and doctor of medical sciences, is head of the Department of Experimental Anatomy of the Institute of Experimental Morphology of the Academy of Sciences of the Georgian Soviet Socialist Republic in Tbilisi.

N. I. Perevokchikova, candidate in medical sciences, is senior scientific worker of the Institute of Experimental Pathology and Cancer Therapy of the Academy of Medical Sciences of the USSR in Moscow.

A. M. Shishova, candidate in medical sciences, is faculty assistant in therapy of the First Moscow Medical Institute.

Meeting these physicians was a privilege and a pleasure, since all of them were exceedingly friendly and seemed anxious to have professional contacts with American physicians. Our State Department had arranged a one month tour for them that included visits to medical centers, inspection of hospitals, visits to radiological institutes, and visits to various research associations. The delegation had visited the cities of New York, Chicago, Cleveland, St.

Louis, Detroit, Madison, Wis., and Washington, D. C. Another delegation of Russian women surgeons had toured Europe and were at present in Mexico City to attend international surgical meetings.

Two of the Russian physicians, who spoke English, contributed the following information at various times during our conversation.

Women physicians in Russia are constantly getting better positions and better salaries as they take over the higher positions in the fields of public health, medical education, and research. A large number of them are going in for medical research on virus diseases. Most are married and have children. This does not interfere with the responsibilities of their profession, since pregnancy and delivery entitle them to three months' vacation evenly divided between the predelivery and postdelivery date. After that the mother brings her child to a day nursery, where it receives competent nursing and medical care during the mother's working day. Women physicians who hold important teaching or research positions work only six hours a day and can enjoy their families during the evenings, weekends, and vacation periods.

The average salary of a professor in one of the medical specialties varies between $1,000 and $2,000 per month depending on years of service. Their socialized system of medicine entitles physicians to various fringe benefits such as free medical service, occasional use of an automobile, and frequent trips to rest homes or seashore homes as needed. Physicians are encouraged to take advanced medical studies by getting double pay. After graduation from medical school, physicians can obtain two more degrees: (1) candidate of medical sciences after three years of graduate medical study and research; and (2) doctorate in medical sciences after writing a thesis on original investigations, if the thesis is approved by a special scientific commission.

The delegates stated that Russian women physicians are satisfied with their status in Russia but are anxious to establish contact with women physicians in other parts of the world. They were interested in learning about activities of the American Medical Women's Association and the Medical Women's International Association.

The visitors also stated that top-ranking physicians in Russia are frequently moved from one post to another. The Academy of Medical Sciences sends leading physicians wherever there is a need for their particular type of service. Recently many of them have seen service in China.

According to the delegates, the Soviets make frequent use of "live" vaccines. They employ such vaccines against colds, influenza, tularemia, and undulant fever. Great strides have been made in controlling infectious diseases that previously appeared in epidemic form, for there are many environmental factors affecting the health of people in the USSR. Russian physicians believe in the effectiveness of a dry powder, derived from immunized horse serum, to relieve the symptoms of Asiatic influenza. They use this in inhaler form and state that it can be purchased without prescription for 1 ruble (25 cents) in Soviet drugstores.

The delegation leader admitted that all members of her group were greatly impressed by the medical facilities in this country, especially our radiologic institutes, and by research activities observed at the National Institutes of Health in Bethesda, Md. She added that contact between American and Soviet physicians could be best improved by more frequent personal contacts and exchange of scientific literature of both countries.

The recent trip of this delegation was the result of an exchange fellowship arranged by our State Department. Soon a group of six American women physicians will be selected to visit Russian medical institutions for a period of one month. Our State Department will arrange all details, and expenses will be underwritten by the Rockefeller Foundation. At present, it is not known who the six fortunate Americans will be.

The Second World Conference on Medical Education is scheduled for 1959, to be held in Chicago, Aug. 30 to Sept. 4. The theme adopted for this Conference is "Medicine—a Life-Long Study."

Education News

SPEEDED CURRICULUM AT COLUMBIA

In order to develop a new and changing philosophy of medical education, a continuing program has been inaugurated at Columbia University's College of Physicians and Surgeons. The semester system has been replaced successfully by a plan that gives students five years of academic study in four calender years.

According to Dean William C. Rappleye, medical education is now a graduate discipline that should be integrated with the entire learning process. The undergraduate medical course should be considered a unit and not a series of independent compartments.

Under the year-round study plan, third year students register immediately upon completion of their second year. The student remains in constant attendance from the beginning of his second year until graduation, except for one month of vacation each year. This procedure makes it possible to integrate the teaching schedules with the hospitals and clinics with which Columbia is affiliated.

SCHOLARSHIPS

The Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C., has announced that 8 of the 54 students admitted to the medical college for the 1958-1959 term will be awarded Reynolds scholarships. The scholarships are limited to North Carolina students who have been legal residents of the state for at least two years and who intend to practice in the state. The scholarships will extend through the course leading to the degree of doctor of medicine and through two years of postgraduate training. The stipend for four of the scholarships will be $2,400 annually for the six year period; the stipends for the remaining four will be in graduating sums of $3,000, $3,300, $3,600, $4,500, and $4,800 for successive years.

MEDICAL RESEARCH

With 400 million dollars available in 1957, medical research is no longer starved for funds, according to a nationwide survey released by Merck & Co., Inc., in December, 1957.

The survey solicated opinions on the present state of medical research from a selected sample of professional and lay leaders, including some of America's best-known medical scientists, four of whom have won the Nobel prize.

"The American people have been very generous in their support of research in the health field, nearly doubling the funds for this purpose in the past five years," John T. Connor, President of Merck, said in announcing the results of the survey, which was sponsored as a public service by the Merck Sharp & Dohme Research Laboratories. "The survey shows, however," he said, "that there are islands of poverty in this sea of plenty. Basic research is being neglected, medical education is in danger of being strangled, brainpower is in short supply. These and other problems uncovered by this survey require immediate, thoughtful, and concerted attention by leaders in government, the universities, foundations, and the pharmaceutical industry."

Douglas Williams Associates, who conducted the survey, interviewed a sample of 113 medical research leaders—medical school deans and department chairmen, high level government officials, presidents, and other officers of foundations, hospitals, medical associations, and pharmaceutical companies. The persons interviewed were carefully selected to assure that all major fields and types of activity and pertinent scientific disciplines were proportionately represented. The interviews were anonymous and respondents were encouraged to talk freely and frankly about any aspect of the problems of medical research they deemed important. Interviews lasted from 30 minutes to more than three hours. Roughly half of the Williams report, which is entitled "The New Era in Medical Research," is composed of direct quotes from these interviews.

The survey showed that the field of medical research had grown so fast under the impact of new funds in the past few years that, though major problems have been identified, there was now a great need to work out some agreed solutions. The field is characterized, at

present, by widely divergent opinions. The following are the major problems listed in the report that concern many, if not most, of the experts.

First, there was nearly universal agreement on the need for more basic research. As one of those interviewed put it: "It's necessary to shout from the housetops: 'Don't forget basic research!' People may hear and remember." In some areas the well of knowledge from which new discoveries flow was said in these pre-Sputnik interviews to be drying up because of neglect of basic research. "There's no distinction in the public's mind," one respondent said, "between pumping a well handle and looking for a new well." The public is held partly responsible, since it will approve the appropriation of millions of dollars to "cure cancer" and become apathetic about funds to study cell physiology, which may or may not lead to a cure for anything. "Many criticize the general tendency," the report states, "to organize medical research into disease categories (cancer research, poliomyelitis research, and so forth) and feel that much neglect of basic research stems from this practice. Some feel that Congressional pressure has tended to force the field in this direction." There are many, however, who favor the disease category approach. They say it is the only way to raise large sums for medical research and that these sums are being administered flexibly enough to assure adequate support for basic research.

Second, it was stated that medical education is being impoverished to enrich research. The new abundance of research funds is drawing topnotch people away from teaching, adding a substantial load to the already overburdened administrative budgets of medical schools, and rapidly increasing the universities' dependence on the government, from which most of their outside money is now coming. The report says that, though there is wide rejoicing over the fact that adequate funds for research are available for the first time, medical schools occasionally turn down grants because it costs too much to accept them. New researchers have to be trained, and space, services, and overhead have to be provided. The 15 per cent for overhead allowed by the National Institutes of Health of the Public Health Service, the major source of government funds, is considered inadequate.

Third, it was emphasized that brains are much scarcer than dollars. The report summarizes this point as follows: "A recurring refrain, which lasted during the whole survey, was that the main need now is for 'men, not money.' There are many who question the government's spending program in medical research because, in their opinion, there are not enough people scientifically qualified to utilize the money effectively."

Low pay is the most critical factor affecting the shortage. "Most feel that there is a financial burden placed on those competent people who elect to enter or stay in the research field," the report states. There is a shortage of technicians, administrators, creative people, and teachers. This has led, some say, to the acceptance of mediocrity and to pirating. The hardest men to find, apparently, are the creators. The report illustrates the point with this quotation from an interview: "Research, in order to be of value and produce new scientific achievements, must be guided by dreamers who have a very full knowledge of pathology, pharmacology, and other disciplines. The number of such men in the world is woefully limited—the kind of men who come up with so-called cockeyed ideas, rather than orthodox ideas. Orthodox ideas lead to nothing."

Fourth, it was stressed that there is great controversy about the role of government in "the new era in medical research." The new era dates from 1956, when "Congress established a new national policy: that henceforth the United States would try to conquer disease through research, whatever the cost." This policy was matched by appropriations. In two years Congress more than doubled the funds for the National Institutes of Health, raising them from 98 million dollars in fiscal 1956 to 211 million dollars in fiscal 1958. Despite rejoicing over the end of the age of starvation for medical research, there is controversy over whether this is a proper role for government, over how much can be accomplished by money alone, whether the field is vulnerable to government domination, and whether the government should allocate all its funds to universities and others, instead of keeping a sizeable sum for research in its own laboratories.

Fifth, it was stated that the now common practice of raising or appropriating money to cure specific diseases is widely criticized. It is said that this not only inhibits basic research but also forces scientists and university administrators to write their requests for grants to fit them into one disease category or another. One of those interviewed said this is what hap-

pened to a goodly portion of the money allocated for cancer research: "It is grabbed up by the deans of medical schools and a cancer label is put on it. What happens is that very frequently proposals for grants are being rewritten in cancer terms. We do it, too."

Sixth, there has been very little thinking about the wisest way to handle patents, production, and distribution, if a new drug is discovered with government research funds. "There are some, however," the report states, "who express considerable concern over eventual difficulties on this score: for instance, that the government will get into product development full scale, that industry won't be extended adequate protection for its participation in the development of new products, and that the patent concept will be weakened."

"Typhlography" and the Blind

Teaching sightless children the general subjects of the school curriculum began about 160 years ago but, up to now, two subjects have been lacking in the syllabuses of the special schools for the blind—drawing and design. Yet, the blind are probably in greater need of sketches or diagrams than those who see. Deprived of visual impressions that continually enrich our knowledge of the world around us, they need sketches to help them correct their impression regarding the shape of an object and its relation to other objects in space.

Many attempts have been made to develop apparatus and methods that would enable the sightless to learn drawing and design. Nowadays, in special schools, the children use a portable apparatus with which they draw on Plasticine or paper. The hollow lines they trace appear in relief on the other side of the block and a direct photographic print of the drawing is automatically obtained on the sensitized paper placed underneath. The child can correct his drawings as he goes along, so that the apparatus is to the blind boy and girl what pencil, paper, and eraser are to the sighted. This apparatus is used in teaching a new subject that, since 1956, has been introduced into the curriculum of all schools for the blind in Russia. It is called "typhlography" and is designed to teach the sightless student such skills as drawing, geometric diagrams and projections, industrial design, and clay modeling. The system is based on G. Monge's method of orthogonal projections.

Through typhlography the blind student not only learns how to depict the volume of an object on a flat surface but also how to "decipher" industrial designs, drawings in general, and all other kinds of graphic images. The system also aims at developing the child's aesthetic sense, and, in the more advanced classes, students also are given a short course on the history of art.

Learning to decipher images helps the child to acquire a clear notion of the shape and main features of many formerly unfamiliar objects. Blind students find it easier to gauge the shape and structure of certain objects such as planes, boats, or architectural structures through relief drawings. Their skill in handling these drawings enables them to make a wide use of the illustrations in their textbooks, starting from simple reading primers and eventually broadening out to include nearly all subjects in the secondary and higher school curriculums. And blind children's own drawings have helped their teachers to understand how the sightless imagine this or that object and to correct their impressions whenever necessary.

There is no need to be a specialist to realize the terrible limitations imposed on a blind person in terms of concrete knowledge and the tremendous number of words that really mean nothing to him. The key note of typhlography is that no word should be taught without at the same time imparting concrete understanding of that word, and it is along these lines that this new teaching system is developing. (UNESCO)

Medical Highlights

SINGLE FATTY MEAL MAY TRIGGER HEART ATTACK

A single meal rich in fat could precipitate a heart attack, according to a theory advanced by a physician in a December issue of *The New England Journal of Medicine* (257:1275, Dec. 26, 1957). Dr. George J. Schoepfer of the University of Minnesota Hospitals believes that older persons who eat foods rich in animal or saturated fat exhaust the mechanism provided them by nature to clear fat from the blood stream. Such fat not only clogs the heart's feeder arteries with fatty deposits but also make blood clots more likely to develop.

Briefly, this is the theory offered by the Minnesota doctor, to explain the findings of numerous investigators into the mystery of heart disease, the number one killer in Western nations: An important part of the blood's system for transporting fats to places where they are burned or stored are the so-called mast cells found in the body's connective tissue, such as, bone, muscle, and cartilage. These cells liberate the anticlotting agent heparin, which acts to stimulate production of an enzyme, lipoprotein lipase. This enzyme, in turn, acts to help carry fat through the blood.

Summarizing discoveries of many investigators, Dr. Schoepfer notes that reduced numbers of mast cells have been found in the hearts of older people suffering from atherosclerosis but that such cells are not reduced in young people and older persons who have no atherosclerosis.

Dr. Schoepfer ties all these factors together with this hypothesis: A person with undetected atherosclerosis (probably caused by consumption of too much saturated or animal fat and too little unsaturated fat) eats a meal rich in fat. The fat, entering his blood stream, increases the likelihood of the blood's clotting. The lack of mast cells reduces his clot-dissolving ability by reducing the heparin supply, and that same reduction in heparin slows up the process by which fats are cleared out of the blood stream. All of these factors then tend to produce a clot that lodges in a heart or brain artery already narrowed by fatty deposits.

Dr. Schoepfer states that, whether or not factors involved in fat metabolism are primarily involved in the origin of atherosclerosis, a change in the fat intake of Americans both in quantity and in degree of saturation appears to be indicated if reduction in the frequency and severity of atherosclerosis in this population is to be realized.

MORTALITY RATES FOR WOMEN

American women are just about the healthiest you can find anywhere in the world, according to prevailing mortality rates reported by statisticians of the Metropolitan Life Insurance Company. Only the women of Norway, among the 19 countries included in a study made by the statisticians, have a lower mortality than those of the United States. In Norway the female death rate from all causes is 6.4 per 1,000 per year; in the United States the corresponding rate is 6.9 per 1,000.

Although differences in mortality between countries have been decreasing in the last few decades, wide international variations are still observed, the statisticians report. For instance, the female death rate from tuberculosis of the respiratory system ranges from a low of 4 per 100,000 in the United States, Australia, and New Zealand to a high of 47 per 100,000 in Japan. Pneumonia as a cause of death among women also shows a wide variation from the 16 per 100,000 in the United States to the high of 53 per 100,000 in Finland.

Only in deaths from motor vehicle accidents do American women suffer the highest rate in the world, 11 per 100,00. The lowest death rate from this cause—2 per 100,000—is found in Israel.

"International data on mortality from specific causes are instructive, even though they are not strictly comparable," the statisticians comment. "The variations are influenced by the general level of medical practice, modes of certifying causes of death, and classification procedures."

World Health Organization

PROGRESS IN THE AMERICAS

The most important single development in public health in the Americas during the past decade has been the rapid growth of international co-operation in the solution of the health problems of the Hemisphere and the constant improvement in the co-ordination of the activities of the several official participating agencies. This co-ordination has led to a change in strategy from disease control to active offense, with disease eradication as the objective for the solution of certain specific health problems. The year 1958 finds the countries of the Americas committed to no less than four eradication programs for the permanent elimination of smallpox, yaws, urban yellow fever, and malaria from the continent. A decade ago only one program, that for the eradication of the *Aedes aegypti* mosquito that transmits yellow fever, had been approved, and the means were not then available for its execution. It is highly significant that the proposal for the eradicaton of yaws in Haiti, first made in 1949, has been followed by several yaws eradication programs in other parts of the world. Most significant of all is the increasing dedication of the nations of the world to the program for the eradication of the world's leading killer of a decade ago, malaria.

Eradication programs are and have been only a small part of the activity of the international health organizations; indeed these programs are possible only because of other international health actitivies supporting the development of general health programs. As success comes to the present eradication programs, it is to be expected that other diseases will be found eradicable and will be eradicated.

As the first decade of the WHO ends, it is obvious that international collaboration in health has justified itself and has unlimited possibilities for the future. The countries of the Americas and of the world are learning better each year how to work together for the common good. It has long been recognized that disease knows no boundary; we are now learning that organization for health also can have no boundary. (From "Ten Years of Health Progress in the Americas," by Dr. Fred L. Soper, for World Health Day.)

MECHANIZATION AND AUTOMATION

In pace with the technical developments that give rise to increased chemical and physical threats, the social environment is becoming progressively more complex. The machines and institutions created to increase production and facilitate distribution lead to new stresses. The agriculturist—the erstwhile peasant, the farmer, the fellaheen—no longer sustains himself and his family alone in an isolated environment. Today he is increasingly part of an organized community in which he competes and makes his contribution to economic and social progress.

When industry, mechanization, and automation are introduced abruptly into a locality, changes often come about suddenly, with little time for adaptation. Tradition, customs, and taboos are swept aside unceremoniously by the irresistible assault of progress. Not long ago an airplane made an emergency landing outside a village on a plateau high in the Himalayas. Until that time the villagers had never seen a wheel. One can imagine the shock and strain involved in spanning in one great leap of the imagination and comprehension the full scope of man's milleniums of technical development from primitive implements to the airplane!

In this rush of progress man must learn to live with man. The strain is producing its toll. In certain of the highly industrialized countries as many as one half of the total available hospital beds are occupied by persons with mental disease, many of whom are victims of this intense social stress. This provides a crude measure of the scope of the problem. (From "A Glance and a Look Ahead," by Dr. H. van Zile Hyde, for World Health Day.)

President's Message

In a recent survey for a column in the women's section of a local newspaper, a number of women physicians and scientists were asked the question, "Do you think science scholarships should be given to men and women on a fifty-fifty basis?" For obvious reasons no one answered with an unqualified "yes." Whether students are selected for science scholarships, admission to medical school, or any form of higher education, sex, ideally, should not have any influence on the choice. Ability, aptitude, and scholastic merit offer the only sound basis for selection. As long as a greater number of men than women make application for medical or other scientific study it is reasonable that men will qualify in greater proportion.

The "Report on the Survey of Women Physicians Graduating from Medical School Between 1925 and 1940," appearing in this issue of the JOURNAL, needs careful appraisal. The problems presented need thoughtful evaluation. To accept the statistics presented as a fully comprehensive comparison would be as unfair as to give an unqualified "yes" to the scholarship question above.

It should not be much of a surprise to find that the report shows women medical graduates earn less money and put in fewer full-time hours of practice than a comparable group of men. Biological and cultural patterns place women in the role of mother and homemaker. Even when these are successfully combined with a professional career, certain interruptions and unexpected absences from duty are unavoidable. When both parents are employed it is more often the mother who stays home from work to be nurse when one of the children is ill. The husband is still, by our culture and in fact, the major breadwinner in the average family. A man with a dependent wife and children may be employed through consideration of his need in preference to a better qualified woman. Employment opportunities and sometimes salary scales are weighted in favor of men in nearly all fields of employment. With growing appreciation of womanpower, industry in general is making more part-time positions available and providing suitable periods of maternity leave and emergency absence provisions.

Medicine offers unique possibilities for part-time and limited types of practice that can be compatible with home responsibilities. The possibility that groups of medical homemakers might pool their available free time to offer together the equivalent of full-time coverage has not been adequately explored. I personally know of one young mother who returned to part-time practice of surgery through the inspiration she received attending branch meetings of AMWA where she talked with others who had or were facing similar problems successfully.

A large percentage of medical women work on a full-time basis. Many have made outstanding contributions to practice, research, and teaching. Those who have engaged in part-time practice have rendered a real service to their communities. Even those who have made no formal use of their training cannot be arbitrarily accused of wasting their training. They represent a potential womanpower reserve in the event of an emergency and they may well be serving their homes and communities more ably than can be demonstrated by survey statistics.

Vocational counselors for high school and college women must have difficulty in making long years of postgraduate study seem attractive in the face of limited employment opportunities and the possibility that homemaking and child rearing may limit the use these graduates make of their training. We can help make the adviser's task easier by presenting the positive advantages available to medical women. In view of limited medical school facilities for meeting the need for graduates and the heavy investment that the student and the community must make, both men and women who choose this field must be impressed with their obligation to devote a reasonable amount of time to putting their training into use, remunerative or otherwise. We who are in practice can do much to aid, encourage, and point the way that mothers of young children can follow to make this possible.

Elizabeth S. Kahler

American Medical Women's Association, Inc.

TENTATIVE PROGRAM
1958 ANNUAL MEETING

Headquarters: June 19-22
Sir Francis Drake Hotel
San Francisco, Calif.

Thursday, June 19
Committee Meetings
Executive Committee
Finance Committee
Publications Committee
Other Committee Meetings as Called by the Committee Chairmen

Friday, June 20
8:30 a.m.—Board of Directors Meeting
9:30 a.m.—Annual Meeting convenes
12:30 p.m.—Luncheon at Women's City Club and Panel on "Emotional Health of Women"
The employed woman
The wife and mother
The retired woman
3:00 p.m.—General Session at Women's City Club
7:00 p.m.—Woolley Memorial Lecture at Sir Francis Drake

Saturday, June 21
8:30 a.m.—General Business Session at Sir Francis Drake
11:00 a.m.—Hearing on Resolutions
12:30 p.m.—Luncheon at Sir Francis Drake and Group Discussion: "Emotional Health of Women"
6:00 p.m.—Guest of Mead Johnson and Company at Sir Francis Drake
7:00 p.m.—Inaugural Banquet at Sir Francis Drake
Inaugural Address by Katharine W. Wright, M.D.
Presentation of Elizabeth Blackwell Award

Sunday, June 22
9:00 a.m.—Executive Committee Meeting
10:00 a.m.—Meeting of New Board of Directors
11:00 a.m.—Hearing on New Constitution and By-Laws
12:30 p.m.—Luncheon at Sir Francis Drake and 1958-1959 Program Preview: Panel on "The Physician in the Role of Adviser," Rosa Lee Nemir, M.D., Moderator
"In the Home," Judith Ahlem, M.D.
"In High School," Mary Mitchell Henry, M.D.
"In College," Mary Helz, M.D.
"In the Community"
"In the Physician's Office," Camilla Anderson, M.D.
3:30 p.m.—Continuation of Hearings on New Constitution and By-Laws
Evening as Arranged by Local Committee
Thursday Evening, "Dutch Treat Dinner and on the Town"

For Room Reservations and Instructions, see advertising pages 22 and 24; for Meals Reservations, advertising page 26.

Mary Thompson Hospital

Dr. Mary Harris Thompson, one of the first women physicians in the United States, went to Chicago from New England nearly a century ago. In May, 1865, she founded the Mary Thompson Hospital in order to give medical care to needy women and children and to provide a hospital where women physicians could practice at a time when they generally were not accepted.

The hospital first was located in a rented house at the southeast corner of what is now the intersection of Rush Street and Grand Avenue. It provided 14 beds, a two-room dispensary, and a room for medicines. The hospital moved to seven different locations in the 93 years of its existence. One move was made necessary by the Chicago fire, which destroyed all facilities. The present structure was completed in 1929 at 140 N. Ashland, a good residential area at that time, but which, over the years, has became highly industrialized. A survey and research report in 1956 revealed that the character of the neighborhood had gone "full cycle" and that approved rehabilitation projects would bring a rebirth of the area west of the Loop. With this encouragement, and since the physical structure of the hospital was sound, a program to improve and develop the present building was undertaken in July, 1957.

The first step in the reconstruction program was a new diagnostic center, located in a one-story building in the hospital's courtyard, and a second floor remodeling job provided 11 more beds for the center's inpatients. Covering 1,679 feet of floor space, the center provides all necessary facilities for complete diagnostic service. Patients may "go through the center" on an inpatient basis, and part or all of their expenses can be defrayed with hospital insurance. This is not usually the case, since most diagnostic work is done on an outpatient basis.

The present facilities of the hospital would amaze and gratify Dr. Thompson. These facilities include a large "general" laboratory, a specimen room, a bacteriology room, and the pathologist's office, furnished with the newest equipment that makes possible speedier procedures and highly accurate results on all tests. The department of roentgenography has separate rooms for radiography, fluoroscopy, and roentgen-ray therapy, and includes a dark room, a doctor's viewing room, a file room for film, and offices for the roentgenologist and her secretary.

Three examining rooms, an emergency treatment room, and five dressing rooms are included in the center. An administrative coordinator, located at the entrance of the center, schedules tests and examinations and expedites the patients' progress through the center. New equipment and furnishings have been installed in the center. Transaver stretchers add greatly to the facility and ease of handling patients. The stretchers, shuttlers, and straddlers are light-weight magnesium units that eliminate as many as 10 separate transfers of the patient, previously necessary if he underwent examination, roentgenography, and surgical procedures. Once the patient is placed on the Transaver stretcher, the equipment is moved without again lifting the patient. The stretcher can be placed on the shuttler for transporting and then onto the straddler, which has legs that move outward so that the entire unit slips easily over all types of examining, roentgen-ray, or operating tables. Hausted Conver-Tables double for stretcher duty, or can be quickly converted into an obstetric or examining table without disturbing the patient. A Lumerton colorimeter used in the laboratory for chemical analysis of the blood is highly accurate and simple to operate; a flame photometer used in determination of sodium, potassium, and calcium in the blood cuts testing time from a previous one and a half hours to five minutes.

Located in remodeled rooms adjacent to the center are a physician's library and conference room, stocked with up-to-date reference books; a medical records room, where a well-organized tab-file system consolidates records and simplifies finding patients' histories; and a

pharmacy, stocked with more than 6,000 varieties of pharmaceuticals and equipped with specially designed refrigeration for storing antibiotics.

On the remodeled second floor of the hospital there are four two-bed and three single rooms, with attractively styled tinted furniture and cheerful pastel-colored walls. There are three treatment and examining rooms: one for general use; one for eye, ear, nose, and throat; and one for proctoscopic work. The office of the director of medical service, the office of the director of nurses, a nursing station, and a patients' lounge, furnished with comfortable sofas and chairs and with a card-playing and television area, are on the second floor. Also located there are the nurses' lounge, physicians' lounge, and residential quarters. The nursing section is equipped with a Dukane communications system that is connected with all patients' rooms; this picks up even a whisper from bedrooms without any button being pressed or signal light turned on. In this way the nurse on duty is in touch with patients at all times.

High-low, electrically operated beds eliminate the old fashioned cranking system for changing the patient's position. The nurse uses push-button control for raising the patient's head, knees, or feet or for adjusting the height of the bed. By using an adapter the patient may make desired changes in position without assistance of the nurse. The all-purpose beds permit all types of equipment to be attached. Rubber sheets are not needed since surfaces do not stain and can be washed clean and sterilized; in other words, they are "patient-proof."

Rooms for medical and surgical patients and an 18-bed pediatrics ward are located on the third floor. On the fourth floor is the obstetrics ward, with rooms for patients in labor, delivery rooms, rooms for postpartum patients, a nursery, an admitting room, a waiting room for fathers, and a meal kitchen. On the fifth floor are rooms for medical and surgical patients, two major operating rooms and one minor operating room, and a room for cystoscopy.

The center is the first step in a long-range program of expansion. Future plans include rehabilitation of the exterior and top three floors of the present building, installation of new and additional elevator equipment, conversion of the top floor to living quarters for the medical staff, and acquisition of adjacent land for construction of a 60-bed addition to the hospital.

The Mary Thompson Hospital, which has been known as Women and Children's Hospital, has an attending staff composed entirely of women. The hospital has stayed close to its original concept of medical care for women by women. In recent years it has admitted male physicians to its consulting and courtesy staffs. Twenty per cent of the patients now admitted are men.

The hospital has an enviable record of achievements. It provided the first women's medical school in the Midwest, founded by Dr. Thompson in 1870, which later was taken over by Northwestern University. It opened Chicago's first nursing school in 1874, which continued until early in the 1940's. The Dionne quintuplets received their first mother's milk from Chicago's first mothers' milk bureau, started at the hospital in 1930. The first cancer prevention clinic outside of Philadelphia and New York was established in 1943. (This clinic was taken over by the Cancer Prevention Center.) At the hospital the Midwest's first cardiac kitchen, especially designed for women with heart trouble, is used to instruct the women in health-saving, heart-saving activities in their own kitchens: it features equipment and styling in reach of low and middle income groups. In 1946 the first mental hygiene clinic for working women was opened, providing professional care and treatment of women with emotional problems.

Dr. Evangeline E. Stenhouse, Past-President of the American Medical Women's Association, is president of the medical staff. Dr. M. Alice Phillips, AMWA member, is medical director. Wallace C. Fischer, husband of Dr. Elizabeth R. Fischer, Treasurer of the AMWA, is president of the hospital's board of trustees. Members of AMWA who attended the 1956 Annual Meeting in Chicago will recall the interesting tour of the Mary Thompson Hospital as one of the main features of the meeting.

The Mary Thompson Hospital received a gift of $3,000 in 1957 and $2,000 in 1958 from the American Women's Hospital, Medical Service Committee of the AMWA.

DIRECTOR OF MEDICAL SERVICE

Dr. M. Alice Phillips, formerly Chairman of the Department of Obstetrics and Gyne-

cology at New England Hospital in Boston, has been named director of medical service at Mary Thompson Hospital. A native of Sullivan, Ill., she graduated from the University of Illinois and Rush Medical College. After internship at North Chicago Hospital, she studied abroad and returned to Chicago to train in obstetrics at the Chicago Lying-In Hospital. Later, she entered the private practice of obstetrics and gynecology in Chicago. At the time of her appointment to the New England Hospital, she was an associate on the staff of Lying-In Hospital and chairman of the staff of obstetrics and gynecology at Mary Thompson, then known as Women and Children's Hospital.

PRESIDENT OF MEDICAL STAFF

Dr. Evangeline E. Stenhouse, President of Medical Staff at Mary Thompson Hospital, was born in La Salle, Ill., and graduated from the University of Chicago. Her premedical activities included two years of teaching in a district high school in Minnesota and an eight year association with the Young Women's Christian Association in Chicago and Grand Rapids, Mich. She obtained the M.D. degree at Rush Medical College.

Dr. Stenhouse interned at the Swedish Covenant Hospital and had three years of specialty training in dermatology at the University of Chicago Clinics. She was certified by the American Board of Dermatology and Syphilology in 1938. She was associated with the Student Health Service of the University of Chicago from 1935 to 1940 and with the Department of Dermatology, University of Chicago Clinics, from 1940 to 1942. In addition to her private practice, Dr. Stenhouse is attending dermatologist at Mary Thompson and Chicago Memorial hospitals. She is on the courtesy staff of the Illinois Central Hospital and is consulting dermatologist at Swedish Covenant Hospital. She is a diplomate of the National Board of Medical Examiners; a fellow of the AMA; and a member of the Chicago Dermatological Society, the Society of Investigative Dermatology, and the Academy of Dermatology and Syphilology.

Dr. Stenhouse, Past-President of the AMWA, brings a wealth of executive ability to her new position as president of the medical staff at the Mary Thompson Hospital.

AMENDMENTS*

THE FOLLOWING AMENDMENTS TO THE CONSTITUTION AND BY-LAWS will be offered for action by the voting body of the 1958 Annual Meeting.

CONSTITUTION. Article VII.

This Constitution may be amended at any Annual Meeting by either a three-fourths vote of the paid-up members present, *or by a three-fourths vote of returned mail ballots*, provided the amendment shall have been given the members either by mail or by publication in the official organ of the Association at least 30 days before the amendment is presented.

BY-LAWS. Article IX.

The By-Laws may be amended at any regular meeting by either a majority vote of the paid-up voting members present, *or by a majority vote of returned mail ballots*, provided the amendment shall have been given the members either by mail or by publication in the official organ of the Association at least 30 days before the amendment is presented for vote.

—Josephine Renshaw, M.D.
Chairman, Constitution and By-Laws Committee

*To be published in the JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION in March, April, and May.

FILMS

SCHIZOPHRENIA

Two films on schizophrenia, one with and one without sound, taken at special schools for schizophrenic children, are available for professional use only. They are not suitable for lay groups. There is a rental charge of $5.00 for the silent film and $7.50 for the sound film, to cover handling, postage, insurance, and so forth. Any profits made are contributed to the League for Emotionally Disturbed Children. For information or rental, write to the League, 10 W. 65th St., New York City 23.

These films were made by DR. RUTH BAKWIN, a New York City pediatrician, and were shown at meetings of the American Academy of Pediatrics in Houston and New York City in 1956.

GRAND ROUNDS

Films of the Grand Rounds closed circuit television programs on "Acute Abdominal Problems," "The Cardiac Patient in Stress," "Borderlines of Cancer," "Pre-Malignant Lesions of the Breast and Colon," "Diagnostic and Therapeutic Advances in Liver Diseases," and "Three Key Questions in Coronary Disease" are available to officers of medical schools, institutions, societies, and hospitals, and to medical students without cost. The films are 16 mm. sound Kinescopes and are 90 minutes in length. To make arrangements for local showings, please contact your local Upjohn representative, or R. P. Trubey, The Upjohn Company, Kalamazoo, Mich.

Medical Education Week

April 20-26

What are you doing to advance or assist the education of women in medicine?

When you educate a man you educate an individual; when you educate a woman you educate a whole family.—*Charles D. McIver.*

(Upper) Killarney. *(Middle)* Edinburgh. *(Lower)* Stratford.

1958 MWIA 1958

The tour to Europe offered in connection with the MWIA's Eighth Congress in London is a project in which sightseeing, professional programs, and relaxation are extremely well balanced.

Dublin, Belfast, Edinburgh, London, Stratford-on-Avon, Bruges, and Brussels with its World Fair; Paris, Chartres, and the Loire country; Barcelona and Madrid; the fabulous cities of Andalusia, Córdoba, Granada, Málaga, Algeciras, and Sevilla; and Lisbon are some of the exciting highlights of the sight-seeing program.

Visits to the famous maternity hospital (Rotunda) in Dublin; to Edinburgh University and the Royal Free Hospital; to the Sorbonne, Pasteur Institute, and St. Louis Hospital in Paris; to various institutions in Barcelona; to the University and Institute of Spanish Culture in Madrid; and to the Instituto Portuguese de Oncologia in Lisbon will comprise the professional program, besides, of course, the Congress program in London and social meetings with local medical women everywhere.

The beautiful Irish countryside with Killarney, Glengaridd, Cashel and Blarney castles, and Glendalough; the Scottish Highlands with Loch Lomond and Loch Ness, Oban and the mysterious island of Iona, the Stones of Clava, Balmoral, Braemar, St. Andrews, the Firth of Forth, and the Trossachs; the Lake District, the Welsh mountains and coast, Stonehenge, Biarritz, the Basque countries and the Pyrenees, Malorca and the plains of Castile, with Toledo, Segovia, Avila and the Escorial, and finally the sandy beach of Estoril—all these will afford the maximum of recreation in unique surroundings.

INTERNATIONAL TOUR

Performances at the famous Abbey Theater in Dublin, the Shakespeare Memorial Theater in Stratford, and the Opera and Folies Bergeres in Paris, and the optional attendance of a bullfight in Spain, will provide some of the additional entertainment.

The entire Tour, leaving New York June 26, 1958, and returning Aug. 24, will cost $1,945. Those unable to participate in the full tour will have the following choices:

Pre-Congress. Part I: From New York June 26 to Eire, North Ireland, Scotland, Wales, and England, ending July 15 upon arrival in London. The cost of Part I, New York to New York, is $995, all inclusive. Part II: The stay in London during the MWIA Congress, July 15 to 21, is not included in the Tour price, since these arrangements are being made by the MWIA.

Post-Congress. Part III: July 22 to 30, to Bruges, Brussels and the World Fair, and Paris. Part IV: July 30 to Aug. 24, to the Basque Country, Spain, and Portugal. Together these cost $1,495. Part III is optional since some members may wish to take part in the post-Congress tours in the British Isles being arranged by the MWIA; a refund of $100 will be granted members omitting this part and joining Part IV in Paris after staying over in England at their own expense. Members who must return earlier may leave the group in London, Paris, or Madrid, returning directly to New York by plane, and proportionate refunds will be granted. Extensions may be arranged according to individual desires and also trans-Atlantic transportation by ship for those who prefer this. Friends and relatives, male and female, are invited to join the Tour. For further details, write immediately to Dr. Ada Chree Reid, 118 Riverside Drive, New York 24, N.Y.

(Upper) Paris. *(Middle)* Amboise Castle, France. *(Lower)* Madrid.

Opportunities for Women in Medicine

AVAILABLE POSITIONS

Canada. One year residencies in medicine and surgery beginning July 1, 1958, are available at St. Paul's Hospital, Saskatoon, Saskatchewan, Canada, a teaching hospital of the University of Saskatchewan College of Medicine. Apply to Sister Y. Prevost, Superior Administrator, St. Paul's Hospital, Saskatoon.

Missionary Fields. Openings for physicians in missionary fields have been announced by the Board of Missions of the Methodist Church. Ten women doctors are sought for openings in internal medicine, surgery, general practice, public health, gynecology, pathology, and radiology. The assignments will be in Belgian Congo, Mozambique, Southern Rhodesia, Angola, India, Pakistan, Korea, the Philippines, Sarawak (Borneo), and Mexico. Requirements are generally the same as for practice in the United States. Other requirements are a first-hand experience of what Christianity is and does, age between 23 and 35 years, and good physical and mental health. Applications should be made to Office of Missionary Personnel, The Board of Missions of the Methodist Church, 150 Fifth Ave., New York City 11.

CLINICAL CLERKSHIPS

Southern Hospitals. The Miner's Memorial Hospital Association offers clinical clerkships to medical students who have completed their third year of study. These clerkships are available during the vacation period following the third year, or during elective periods of the fourth year. Clerkships last from one to three months. The program will include: participation in examination and care of both inpatients and outpatients; attendance at staff rounds and staff and departmental conferences; lectures and seminars by staff; use of the library; and surgical and obstetric assistance. There will be no laboratory work. The hospitals are located in the eastern part of Kentucky, the southern part of West Virginia, and the southwestern part of Virginia. Application should be made to the Clinical Director, Miner's Memorial Hospital Association, 1427 Eye Street N.W., Washington 5, D. C.

GRANTS AND SCHOLARSHIPS

Deadline for Applications. The Orthopaedic Research and Education Foundation has announced June 1, 1958, as the next date for applications for grants by the Foundation. Application blanks may be obtained from Dr. Harold A. Sofield, Secretary-Treasurer, Orthopaedic Research and Education Foundation, 116 S. Michigan Ave., Chicago 3.

Essays on Plastic and Reconstructive Surgery. The Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., has announced the rules for its 1958 scholarship contest. Manuscripts must be submitted before June 1, must not exceed 5,000 words in length, and must not have been previously published. The content of the essays must be the result of some original research in plastic and reconstructive surgery. For full information write to the Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., c/o Dr. Clarence R. Straatsma, President, 5. E. 83rd St., New York City 28.

INTERNATIONAL MEETINGS

"*Allergology.*" The Third International Congress of Allergology will be held in Paris, France, Oct. 19-26, 1958. Symposia, sectional papers, round-table discussions, convention tours, and social activities are included in the program. For full information write to Dr. Samuel M. Feinberg, 303 E. Chicago Ave., Chicago.

Health Education. An International Seminar on Health Education, sponsored by The Central Council for Health Education, will be held in London April 22-25, 1958. The meeting precedes by one week the meeting of the Royal Society of Health. The program is designed to cover the philosophy and practice of health education. Reservation should be

sent to the Medical Director, Central Council for Health Education, Tavistock House, Tavistock Square, London, W.C.I.

MWIA. The Eighth Congress of the Medical Women's International Association will meet at Bedford College, Regent's Park, London, England, July 15-21, 1958. The congress secretariat will be open at Bedford College from July 14. Delegates arriving before that date can contact the Medical Women's Federation, Tavistock House North, Tavistock Square, London, W.C.I. Telephone EUSton 7765. For full information and registration blanks write to the AMWA International Corresponding Secretary, Alma Dea Morani, M.D., 3665 Midvale Ave., Philadelphia.

Pan-American. The VI Congress of the Pan-American Medical Women's Alliance will be held in Miami, Fla., April 14-17, 1958. Headquarters will be the Hotel McAllister. Women physicians of the United States and Canada are cordially invited to become members and attend the Congresses that are held every two years alternately in North and South America. Delegates are expected to represent the medical women of most of the Latin-American Republics. The scientific program is translated into both languages and deals with medical problems of mutual interest.

Two post-Congress trips are being planned. One is to the Carribean area where some of the member groups will be visited. The other is to Washington, D. C., where the hospitality of the Pan-American Union and the various Latin-American organizations is being offered. The Latin-American Music Festival also is being held in Washington at this time. Further information can be obtained from Hilla Sheriff, M.D., Publicity Chairman, Division of Maternal and Child Health, South Carolina State Board of Health, Columbia 1.

Surgery. A second meeting of the newly formed European Federation, International College of Surgeons, has been scheduled for May 15-18, 1958, during the World's Fair in Brussels. This congress will bring together the Austrian, Belgian, English, Finnish, French, German, Greek, Italian, Dutch, Spanish, Swiss, and Turkish sections of the I.C.S. Details may be obtained from the Secretariat, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10.

World Medical Association. The 12th General Assembly of the World Medical Association will be held in Copenhagen, Denmark, Aug. 15-20, 1958. Information may be obtained by writing to the Secretary General, The World Medical Association, 10 Columbus Circle, New York City 19.

Others. Other international meetings scheduled for May through September are: International Congress on the Study of Bronchi, Munich, May 16-17; International Congress of Athletic Medicine, Moscow, May 29-June 3; International Congress of Urology, Stockholm, June 25-July 1; International Cancer Congress, London, July 6-12; International Diabetes Congress, London, July 21-25; Congress for the Study of the Child Aged 1 to 6, Brussels, July 27-30; General Assembly of The World Medical Association, Copenhagen, Aug., 15-20; International Congress of Ophthalmology, Brussels, Sept. 8-12; and World Congress of Cardiology, Brussels, Sept. 14-21.

MEETINGS

Phi Lambda Kappa. The Sixth Annual Interim Scientific Meeting of Phi Lambda Kappa, national medical fraternity, will be held at the Deauville Hotel, Miami Beach, Fla., April 13-20, 1958. The program will be for the benefit of the general practitioner and will feature papers and symposiums by specialists. All members of the medical and dental professions are welcome. Write to Dr. Samuel L. Lemel, National Secretary, Phi Lambda Kappa Fraternity, 1030 Euclid Ave., Cleveland 15, Ohio, for full information.

General Practice. The Tenth Annual Scientific Assembly of the American Academy of General Practice, to be held in Dallas, Texas, March 24-27, will deal with such current questions as: "What are the emotional and physical problems of today's teen-agers?" "Can hypnosis cure headache?" "What causes dizziness?" The Scientific Assembly plays an important role in the Academy's study program. Each member of the Academy must complete 150 hours of accredited postgraduate study every three years. Full information may be obtained from the American Academy of General Practice, Volker Boulevard at Brookside, Kansas City 12, Mo.

Medical Economics. The Washington, D. C.,

District Medical Council, in co-operation with the William S. Merrell Company, will sponsor an all-day forum on current problems in medical economics at the Hotel Statler, Washington, March 27. The major topics will be: The Doctor and His Office, The Doctor and the Law, and the Doctor and His Life Planning.

Medical Technology. The American Society of Medical Technologists will hold their 1958 convention in Milwaukee, Wis., with headquarters at the Schroeder Hotel, from June 15 to 20, 1958.

NATIONAL BOARD OF MEDICAL EXAMINERS

Examinations. The National Board of Medical Examiners, Philadelphia, Pa., has announced the 1958 schedule: Part 2 only, April 22 and 23; Parts 1 and 2, June 17 and 18; and Part 1 only, Sept. 2 and 3.

New Council for Foreign Graduates. The National Board of Medical Examiners has announced a new Educational Council for Foreign Medical Graduates, an independent agency with offices in Evanston, Ill. The agency is under the direction of a board of trustees designated by four co-operating organizations: the AMA, the Association of American Medical Colleges, the American Hospital Association and the Federation of State Medical Boards in the United States. It has been established for the purpose of evaluating the educational background and medical knowledge of graduates of foreign medical schools who are seeking appointments as interns or residents in hospitals in the United States. An examination committee has been created and has scheduled two examination periods for 1958, March 25 and Sept. 23. Permits must be obtained in order to take the examinations. All inquiries concerning the program of the Council should be addressed to Dr. Dean F. Smiley, Executive Director and Secretary, Educational Council for Foreign Medical Graduates, 1710 Orrington Ave., Evanston, Ill.

TOURS

Post-AMA Meeting. The Illinois State Medical Society has arranged a colorful trip to the Hawaiian Islands in connection with the AMA meeting in San Francisco and has extended an invitation to "other physicians and their families to join the group." The party will leave by air the night of June 26. A Hawaiian Summer Medical Conference in Honolulu, July 1-3, will make it possible for physicians to learn something about medicine in the Islands. The tour will leave Honolulu July 5, with the option of air or sea travel. Those taking the boat will have five additional days of enjoyable travel and will arrive in Los Angeles July 10. Complete information may be obtained from Mr. W. W. Moloney, Harvet Y. Mason Travel Company, Inc., Professional Building, "Old Orchard," Skokie, Ill.

Physical Handicap

"I watch two men coming down the street. One propels himself on crutches, the other strides along on a sound pair of legs . . . . My eyes cannot tell which of these two is more severly handicapped . . . . I speculate over which is fitter to survive in the specific environment that we share. Which is the more courteous? The more likely to smile? The more aglow with a warmth for life? The more responsive to another's needs? Which is the better trained in his work and thus more capable of bringing insight and imagination to his labors? Which is less filled with prejudice, less consumed with deceit? . . . . Judge and musician, innkeeper and statesman, actor and surgeon . . . each endures by holding onto beliefs. For any person possessing firm foundations of intellectual strength and spiritual stamina, legs that wobble or arms that shake constitute inconsequential handicaps. As long as any man has a right to be born, a purpose to fill on earth, then a crippled child holds the same right, the same purpose."

The above quotation is from the booklet "Why Did This Have to Happen?" by Earl Miers, author, editor, and Civil War authority and is the author's own story of his conquest of cerebral palsy. The booklet is available for 25 cents from The National Society for Crippled Children and Adults, 11 S. LaSalle St., Chicago 3.

News of Women in Medicine

Dr. Virginia Apgar, Professor of Anesthesiology, Columbia University College of Physicians and Surgeons, and Attending Anesthesiologist, Columbia-Presbyterian Medical Center, New York City, and Dr. Olga Schweizer, Attending Anesthesiologist, Memorial Center for Cancer and Allied Diseases, New York City, participated in discussion of "Problems of Anesthesia in Surgery of the Head and Neck," and Dr. Virginia Kneeland Frantz, Professor of Surgery, Columbia University College of Physicians and Surgeons, participated in a panel on "Problems in Thyroid Cancer" during the annual Scientific Session of the American Cancer Society, Inc., held in New York City, Oct. 28-29, 1957. Dr. Catherine Hess, President of Branch Twenty-Five, Philadelphia, and Medical Director of the Philadelphia Division of the American Cancer Society, attended these sessions.

Dr. Katherine Bain, Washington, D. C., member of the Interdepartmental Committee on Children and Youth of the United States Department of Health, Education, and Welfare, is serving on the planning committee for the 1958 Joint Conference on Children and Youth, to be held March 16-18, 1958, in Chicago.

Dr. Leona Baumgartner, Commissioner of Health for New York City, has been named president-elect of the American Public Health Association.

Dr. Norma Bowles of Colorado Springs was elected vice-president of the Colorado Society of Anesthesiologists at the annual meeting in Denver in September, 1957.

Dr. Leoni Claman, member of Branch Fourteen, New York City, who recently was elected president of the New York Allergy Society, was the subject of a feature article in the *New York World-Telegram and The Sun* on Jan. 16, 1958. The title of the interview was "Medicine Can Mix with Motherhood." She is quoted as saying: "My career never has conflicted with my role as a mother. When you start out as a doctor your practice usually is very small. For this reason when my children were young and needed the most attention, I was able to give it to them. My practice grew as my children grew." Dr. Claman is chief of the allergy service at the Woman's Infirmary in New York City.

Dr. Katherine Dodd, recently appointed Distinguished Professor of Pediatrics at the Louisville School of Medicine, was the subject of an article in the Jan. 1, 1958, issue of *Scope Weekly*. Dr. Dodd retired last June after five years as chairman of the Department of Pediatrics at the University of Arkansas Medical Center. Dr. Dodd is quoted as saying, "A physician is much more than a practitioner of the art of healing. He should be a vibrant member of the community in which he lives. As a pediatrician, for example, he should take leadership in projects for the welfare of children. He should become a force for community betterment, with an active social consciousness. Physicians ought to contribute to their neighborhoods on a social as well as a medical level."

Suzanne Eggleston, a junior AMWA member at the University of California, was the subject of an article on "A Day in the Work of a Woman Medical Student," published in the November, 1957, issue of *MD*. Suzanne is 1 of 4 women in a class of 50 students. She is quoted as saying that no one influenced her to study medicine. "A career as a doctor seems to have been my goal as long as I can remember."

Dr. Golda Fischer of Los Angeles in a letter to *MD* in January, 1958, calls attention to "the heroic service of women doctors of Israel among needy Arabs." Among the dedicated women mentioned are: Dr. Eva Landsberg, formerly a member of Branch One, Washington, D. C., Dr. Helen Kagan, Dr. Kozlova, Dr. Anka Peller, Dr. Lwowa, and Dr. Theresa Better.

Dr. Mary Louise Gloechner, Conshohocken, Pa., member of AMWA and a past Vice-President of the Pennsylvania Medical Society, has been named a member of the Health Resources Advisory Committee, which

advises the Office of Defense Mobilization. Dr. Elmer Hess, Past-President of the AMA, is chairman of the committee.

Dr. Margaret Elizabeth Grisby of Washington, D. C., has been elected to associate membership in the American College of Physicians.

Dr. Marie A. Hinrichs, Director of the Bureau of Health Services for the Chicago Public Schools, was the recipient of a distinguished service citation from the Lake Forest College, her alma mater. Dr. Hinrichs serves as editor of the *American Journal of School Health*, is a member of the executive committee of the American School Health Association, and is the author of numerous articles on physiology and student health.

Dr. Dorothy B. Holmes has been elected second vice-president of the Medical Society of the District of Columbia. Women physicians serving on committees are: Dr. Josephine J. Buchanan, Public Health Committe; Dr. Dorothy D. Dowd, Vice-Chairman, Child Welfare Committee; Dr. Margaret M. Nicholson, Child Welfare Committee, and Corporate Member of the Hospital Service Agency; Dr. Alma Jane Speer, Diabetes Committee; Dr. Josephine Renshaw, Public Policy Committee; Dr. Mary K. L. Sartwell, Public Information Committee; Dr. Jeanne C. Bateman and Dr. Lois I. Platt, Cancer Control Committee; Dr. Naomi M. Kanof, Classification Committee, and Dermatology and Syphilology Committee; Dr. Caroline Jackson, Medical Bureau Committee; Dr. Ella Oppenheimer, Obstetrical Board; and Dr. Grace H. Guin, Secretary-Treasurer of the Section of Pathology and Laboratory Medicine.

Dr. Frances L. Ilg of New Haven, Conn., and Dr. Arnold Gesell received a joint William Freeman Snow award from the American Social Hygiene Association for "distinguished service to humanity." They were cited for their work in the area of personal and family living.

Dr. Margaret M. Kunde, formerly Instructor in Medicine at Northwestern Medical School, presented a lecture on "Keeping Fit Physically" on Nov. 12 to the Hawthorne Parent Teacher Association. The lecture was arranged through the Illinois State Medical Society.

Dr. Carolyn Snyder Pincock of Washington, D. C., received a "certificate of distinction" from the "old" Central High School, now Cardoza, in Washington, D. C. Five alumni of the school were honored on Dec. 22, 1957, for their accomplishments in the armed forces, medicine, civic work, and the ministry. Dr. Pincock was the only woman of the five, and attention was directed to her citation as Medical Woman of the Year of the Washington, D. C., Branch of the AMWA.

Included in the calendar of speakers of the Medical Society of the District of Columbia who have addressed lay groups recently are: Dr. Lois I. Platt, who spoke on "The Cancer Problem Today" for the Volunteer Training Session, Washington, D. C., Division, American Cancer Society; Dr. Elizabeth S. Kahler, President of AMWA, and Dr. Dorothy Jaeger-Lee, formerly of Washington, D. C., now of Atlanta, Ga., who both appeared on The Westinghouse-AMWA radio series "Growing Pains," carried over stations, WBZ-WBZA, Boston; KDKA, Pittsburgh; KYW, Cleveland; WOWO, Fort Wayne, Ind.; KEX, Portland, Ore., and WNYC, New York City.

Dr. Helen M. Ranney, Associate in Medicine, Columbia University College of Physicians and Surgeons, and Assistant Physician at the Presbyterian Hospital, New York City, was a panelist on "Modern Aspects of Hematology" during Postgraduate Week of the New York Academy of Medicine in October, 1957.

Dr. Elizabeth Rieschl, Jordan, Minn., has been re-elected secretary-treasurer of the Community Memorial Hospital in New Prague, Minn.

Dr. Mary Louise Robbins, Associate Professor of Bacteriology at the George Washington University Medical Center, has received a grant from the National Institutes of Health and will undertake "a study of the relationship between bacteriophages and bacteriocines of coliform bacteria."

Dr. Frances Schlitz of Wichita, Kan., recently served as a panelist at a meeting of the Woman's Auxiliary to the Sedgwick County Medical Society. The topic was "Medical Headlines Around the World."

DR. PATRICIA STUFF, formerly of Yankton, S. Dak., has relocated in Bonduel, Wis. Dr. Stuff is a graduate of Woman's Medical College of Pennsylvania.

DR. MARIE PISCHEL WARNER of New York City spoke to the members of the "Mr. and Mrs. Club" at the Inwood Hebrew Center on Jan. 28. Her topic was "Health Aspects of Sex in Marriage."

DR. LOUISE O. WENSEL, member of Branch Forty-One, Southeastern Virginia, was the subject of an article appearing in the Jan. 19, 1958 Sunday magazine section of the *New York Times*. The title of the article was "The Country Doctor Is Now a Lady"; the subtitle "In Virginia, the Woman Physician is Solving a Problem Many Other Farm States Face—How to Replace the Vanishing Rural Practitioner of the Horse-and-Buggy Era." DR. MARY LOU HOOVER, 1954 AMWA Scholastic award winner, is associated with Dr. Wensel. Other women physicians mentioned in the article were: DR. EILEEN JENNINGS, Bedford; DR. FRANCES WOOD, Burkeville; DR. YVONNE D. VARESE, Newbern; and DR. BELLE D. FEARS, Accomac. Edgar J. Fisher, Director of the Virginia Council on Health and Medical Care, is reported to have said: "The Virginia experiment has proved highly successful. The women doctors were placed not because they were women but because they were physicians greatly needed in rural areas. They have proved their worth. They have shown that they are interested in patients not only as clinical subjects but as human beings."

CORRECTIONS

In "Some Aspects of Cholesterol Metabolism" by David Kritchevsky, Ph.D., an article on pages 423-428 of the December, 1957, issue, the symbol for microcurie in the third line from the bottom and in Table IV on page 426 should read μ per Gm.

In "These Were the First" of December, 1957, page 459, Dr. Neff's middle name was given as Mawson instead of Lawson.

THESE WERE THE FIRST

DR. MARGARET CARAWAY of Gulfport, Miss., was the first woman within the state of Mississippi to graduate from the Mississippi Medical College in Meridian (1910) and the first woman to be president of the Tri-County Gulf Coast Medical Society. Dr. Caraway's daughter, Agnes Burt, graduated in 1950 from the Louisiana University School of Medicine.

DR. ETHEL C. DUNHAM of Washington, D. C., graduated in 1918 from Johns Hopkins Medical College and was the first woman on the staff of the New Haven Hospital. Dr. Dunham was on the teaching staff of Yale Medical College and was a consultant member of the Children's Bureau, U. S. Department of Labor. She was also the first woman to be a member of the American Pediatric Society (1920).

DR. ANNE WALTER FEARN (1872-1939) of Holly Springs, Miss., graduated in 1893 from the Woman's Medical College of Pennsylvania and at the age of 27 years went to China where, for 40 years, she served as physician and surgeon in Soochow and Shanghai. She founded a coeducational school for American children and, in Shanghai, established The Fearn Sanitarium. Dr. Fearn was author of "My Days of Strength," an account of her experiences in China.

DR. C. AGNES (MCMAHAN) JONES, Lafayette, Ind., who died in 1939, was graduated from the Woman's Medical College of Chicago in 1879 and was the first woman intern at The Woman's Hospital, Chicago. Dr. Jones practiced in Evansville, Ind., and organized the first nurses' training school in Evansville.

DR. EMILIE VIETT RUNDLETT, of Jersey City, N. J., was the first woman to graduate from the Medical College of the State of South Carolina, Charleston, in 1901. In 1939 she became the first woman president of the medical staff of the Medical Center of Jersey City. She was re-elected in 1940.

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Book Notices

Editor's Note: These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of the JOURNAL.

PRACTICAL OTOLARYNGOLOGY. By Gervais Ward McAuliffe, M.D., F.A.C.S., F.I.C.S., Associate Clinical Professor of Otolaryngology, Cornell University Medical College, New York; Attending Otolaryngologist, New York Hospital; Diplomate, American Board of Otolaryngology, American Trilogical Society, American Board of Plastic Surgery, Harvey Society, and Pan-Pacific Surgical Association. Pp. 320. Price $7.00. Landsberger Medical Books, Inc., New York, 1957.

This is one of a series of handbooks for the general practitioner. As a guide for the physician who wishes to do competent office treatment, it should serve its purpose admirably. The style is so simple that a high school student could understand it. The material is well selected and well presented for the physician who has no special training in otolaryngology; it is adequate for his needs, but does not waste space on details of major surgical procedures. There is a chapter on sinusitis in children and one on postnasal drip which well express the current thought on these troublesome conditions. The chapter on the common cold and on cough is well done; however, in view of the frequency of the condition, vasomotor rhinitis is given a very brief and casual discussion. The book, in short, accomplishes very well what it sets out to do, and would be a valuable addition to the general practitioner's library.

—Emily Lois Van Loon, M.D.

METHODS IN ENZYMOLOGY: Preparation and Assay of Substrates. Volume III. Edited by Sidney P. Colowick, Ph.D., Professor of Biological Chemistry, and Nathan O. Kaplan, Ph. D., Associate Professor of Biological Chemistry, McCollum-Pratt Institute, Johns Hopkins University. Pp. 1,154, with illustrations, Price $26.00. Academic Press, Inc., New York, 1957.

One of four volumes, this book is concerned with the preparation and assay of the substrates of enzymes, whereas the two preceding volumes were oriented toward the enzymes themselves. A glance at the list of distinguished contributors, the table of contents including 149 articles, and the 100 pages of index gives some notion of the comprehensive scope of this book. Since the compounds considered and the methods described are the very substance of biochemistry, it would seem unwise for a research worker in almost any branch of biochemistry to ignore this volume.

—Miriam F. Clarke, Ph.D.

CANADIAN CANCER CONFERENCE. Proceedings of Second Canadian Cancer Research Conference, Honey Harbour, Ontario, June 17-21, 1956. Edited by R. W. Begg. Pp. 398, with illustrations. Price $8.50. Academic Press, Inc., New York, 1957.

The account of this conference on cancer is both thought-provoking and informative. In the first session on the cell, gonadal dysgenesis, hypogonadism, and congenital gonadal defects in relation to tumor development were discussed. The paper on these subjects is quite technical and emphasizes the observation that the altered sex chromatin pattern of malignant tumors seems consistent with the known chromosomal abnormalities in malignant cells. Howatson and Ham of the University of Toronto present interesting reports of the structure of normal and malignant cells as revealed by the electron microscope, and W. B. Oberling and C. Oberling discuss electron microscopy of the malignant cell with special reference to the viruses. These studies require some knowledge of the basic studies of cellular structure and development as well as biochemical cytology. The writers point out that the Shope fibroma virus and the Lucké tumor virus are best known morphologically.

The biochemical studies of the microsome fraction of tissue homogenates are also highly technical, as is the work on mitochondrial metabolism reported by Petrushka, Quastel, and Scholefield of McGill-Montreal General Hospital Research Institute. One section on hormones and carcinogenesis by W. U. Gardner of Yale is an excellent review of all asssumptions regarding the action of hormones on tumorgenesis and carcinogenesis. Lacassagne, well known for his work during the past 35 years, presents an excellent resumé of glandular cancer of hormonal origin, and K. J. Wrightman of Toronto, under the title "A Clinician's Concept of Leukemia," discusses the work of the biochemist, pathologist, virologist, and confesses that they "talk a language" he can barely understand. The section on research on lymphoid tumors and leukemia are of moderate interest.

The paper on spontaneous regression of cancer by W. Boyd, pathologist of Toronto, shows careful study and points out the necessity of research on the defensive forces of the tissues and the possibility of using tumor cells of fractions of these cells as an antigen for stimulation of the natural body defenses. A. Haddow of the Chester Beatty Research Institute of London presents the final survey of "New Facts and Concepts." His 25 years in cancer research have made the chapter one of the most rewarding in the volume.

—Frances H. Bogatko, M.D.

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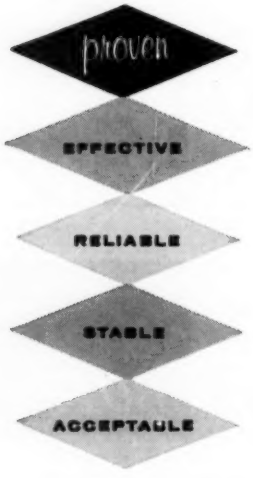

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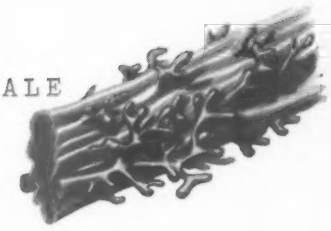
THE FEMALE  URETHRA

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1. Wharton, L. R. in Campbell, M.: Urology, Philadelphia and London, W. B. Saunders Company, 1954, vol. 2, p. 1390 et seq.

2. Barrett, M. E.: J. M. Ass. Alabama 26:144, 1956. 3. Youngblood, V. H.: J. Urol., Balt., 70:926, 1953.

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4. Youngblood, V. H.; Tomlin, E. M.; Williams, J. O. and Kimmelstiel, P.: Tr. Southeast. Sect. Am. Urol. Ass. (to be published).

5. Youngblood, V. H.; Tomlin, E. M ; and Davis, J. B.: J. Urol., Balt., 78:150, 1957.

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But surely...

the lady will be dainty

- Massengill Powder has a "clean" antiseptic fragrance. It enjoys unusual patient acceptance.
- Massengill Powder is buffered to *maintain* an acid condition in the vaginal mucosa. It is more effective than vinegar and simple acid douches.
- Massengill Powder has a low surface tension which enables it to penetrate into and cleanse the folds of the vaginal mucosa.
- Massengill Powder solutions are easy to prepare. They are nonstaining, mildly astringent.

massengill® powder

when recommending a vaginal douche

INDICATIONS:

Massengill Powder solutions are a valuable adjunct in the management of monilia, trichomonas, staphylococcus, and streptococcus infections of the vaginal tract. Routine douching with Massengill Powder solution minimizes subjective discomfort and maintains a state of cleanliness and normal acidity without interfering with specific treatment.

Currently, mailings will be forwarded only at your request.
Write for samples and literature.

The S. E. MASSENGILL Company

BRISTOL, TENNESSEE
NEW YORK SAN FRANCISCO KANSAS CITY

In modern feminine hygiene

and therapy

massengill powder

Massengill Powder has cosmetic elegance. Its clean, refreshing fragrance is acceptable to the most fastidious for therapeutic or routine hygienic use. Massengill Powder solutions are easily prepared, convenient to use, nonstaining. They effectively cleanse, deodorize and soothe the vaginal mucosa, while their mild astringent properties tend to decrease vaginal secretions.

CLEAN-UP AFTER ANTIBIOTICS

Following intensive antibiotic therapy, increasing numbers of female patients return complaining of vulvar pruritus or vaginitis . . . and profuse vaginal discharge.

Most of these present the classical picture of Monilia albicans, Trichomonas vaginalis or mixed infections. When these infections occur, regular use of Massengill Powder, with its pH of 3.5 to 4.5, helps restore the normal acidity of the vaginal tract. At this normal pH the growth of pathogenic organisms is inhibited and the growth of the normal vaginal flora encouraged,[1] thus reducing the barriers to specific medication.

LOW pH RETENTION

Massengill Powder is buffered to retain an acid condition. In a recent clinical observation, ambulatory patients—with an alkaline vaginal mucosa resulting from pathogens—maintained an acid vaginal mucosa of pH 3.5 for a period of 4 to 6 hours after douching with Massengill Powder; recumbent patients maintained a satisfactory acid condition up to 24 hours. Simple acid douches (vinegar or lactic acid) are quickly neutralized by an alkaline vaginal mucosa; therefore, they are somewhat unsatisfactory in maintaining the required acid pH of the vagina.[2]

LOWER SURFACE TENSION

Massengill Powder in the standard solution has a surface tension of 50 dynes/cm. as compared to that of water and simple acid solutions with 72 dynes/cm. This added property of reduced surface tension enables Massengill Powder to penetrate into and cleanse the folds of the vaginal mucosa, thus increasing the therapeutic effectiveness. Lowered surface tension makes the cell wall and cytoplasmic membrane of the infecting organism more permeable and thus more susceptible to specific therapy.[2]

SUPPLY

Massengill Powder is supplied in glass jars of the following sizes:

Small, 3 oz.
Medium, 6 oz.
Large, 16 oz.
Hospital Size, 5 lbs.

Pads of douching instructions for patient use available on request.

REFERENCES

1. Lang, W.R., Rakoff, A.E., Am. Geriatrics Soc. *1*:520 (1953).
2. Arnot, P.H., The Problem of Douching, Western Journal of Surg., Obs., and Gyn., Vol. 62, No. 2:85 (1954).

The S. E. MASSENGILL Company BRISTOL, TENNESSEE
NEW YORK SAN FRANCISCO KANSAS CITY

make poor eaters want to

"COME AND GET IT"

REDISOL®

CYANOCOBALAMIN (CRYSTALLINE VITAMIN B_{12})

REDISOL—vitamin B_{12}—used as a dietary supplement often stimulates appetite with consequent weight gain—youngsters look forward to their meals again.

Cherry-flavored REDISOL Elixir (5 mcg. per 5 cc.) and soluble REDISOL Tablets (25, 50, 100, 250 mcg.) mix readily with liquids.

MSD **MERCK SHARP & DOHME**
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

in iron deficiency anemia

the direct approach

...specific therapy

Fer-In-Sol®

iron in a drop for infants and children

"When iron is indicated give only iron. The therapeutic response will be infinitely better, the medication will be taken with greater facility, and the cost of treatment will be far less."*

In infants and children the most common anemia is that due to iron deficiency; peak incidence is seen in ages from 6 to 24 months.*

Specify Fer-In-Sol—well tolerated, efficiently utilized ferrous sulfate in an acidulous vehicle for better absorption. Its pleasant citrus flavor makes it readily acceptable to young children, and its dropper dosage form makes it easy to give.

You are cordially invited to ask your Mead Johnson Representative for the convenient Fer-In-Sol Dosage Card (Lit. No. 267) or write to us, Evansville 21, Indiana.

*Smith, N. J., and Rosello, S.: J. Clin. Nutrition *1*:275, (May-June) 1953.

Mead Johnson
Symbol of service in medicine

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